# LAKE TIPPECANOE FEASIBILITY STUDY

# KOSCIUSKO COUNTY, INDIANA

October 22, 1998

# Prepared for:

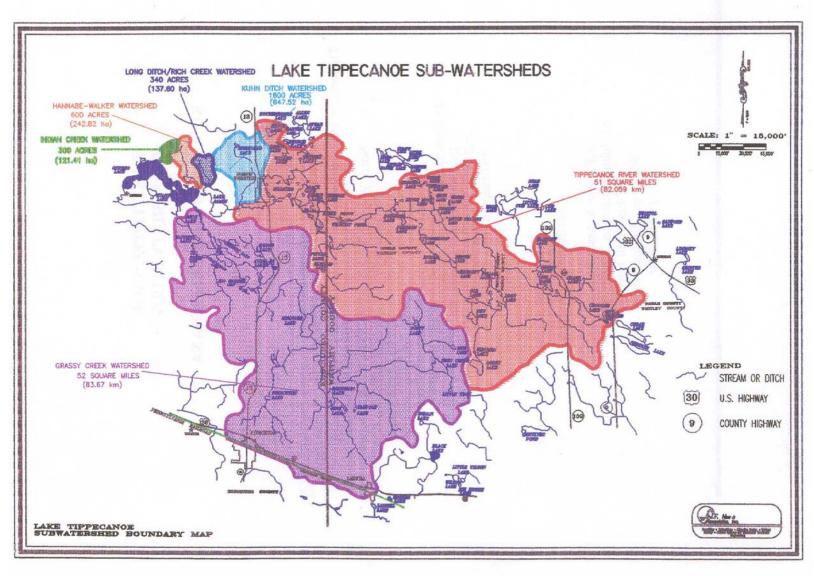
# Tippecanoe Environmental Lake and Watershed Foundation Post Office Box 55 North Webster, Indiana 46555 219-834-2185

and

Indiana Department of Natural Resources
Division of Soil Conservation
402 West Washington, Room 265
Indianapolis, Indiana 46204 317-233-3873

Prepared by:

J.F. New & Associates, Inc. c/o John Richardson, Project Manager 708 Roosevelt Road Walkerton, Indiana 46574 219-586-3400



### EXECUTIVE SUMMARY

The 1997 Lake Tippecanoe diagnostic study documented nutrients, primarily phosphorus, as the limiting factor causing a decline in the water quality of Lake Tippecanoe. The study suggested that controlling sediment and nutrients in three tributaries on the north side of the lake would reduce the phosphorus in the water column. Other recommendations included implementing a no-wake policy in shallow water areas of Lake James, Lake Tippecanoe and Oswego Lake, limited lake bottom dredging of contaminated sediments, sewer hook-ups for residential and commercial structures within 500 ft (105 m) of the lake, and support of Soil & Water Conservation District practices within the entire 112 square mile watershed. This study addresses the feasibility of implementing the proposed sediment and nutrient filters on the northern tributaries to the lake.

Four properties were investigated for potential detention basins, sediment traps and nutrient filters on Indian Creek, Hanna B. Walker ditch and Kuhn ditch. Written agreements were obtained from four cooperating landowners in June 1998. Between June and October 1998 many issues arose affecting the location and the feasibility of several of the projects. A lease agreement was obtained for the Indian Creek detention structures as originally proposed. Two locations for a pilot sediment trap on Hanna B. Walker Ditch remain feasible and designs for both are included in this report. Permits from all federal, state and county offices were applied for and are due to arrive in January 1999.

These projects can be constructed with the Design Build Funds awarded in July 1998. The combination sediment trap/wetland filters on Hanna B. Walker and Kuhn ditches were delayed for several reasons. The water quality in Hanna B. Walker ditch was found to be influenced by the application of animal waste to a steep slope adjacent to the water way. This practice was discussed with the landowner and the landowner will eliminate this practice in that area. The elimination of this nutrient source resolves concerns of the wetland filter on Hanna B. Walker Ditch and this project should proceed to final design using the next available funds.

The Kuhn ditch wetland filter area was reviewed by the landowners after conceptual designs. The landowner decided to participate only if the project was relocated to another part of the property. A new survey was not reasonably available for this work and, therefore, additional designs were not created for this document. The survey and final design work should proceed as funds become available.

Results of studies on other projects of this nature and design parameters have been reviewed to determine the approximate functions and results of the proposed projects. The detention structures on Indian Creek reduce peak flow by 25 to 30% following storm events of three inches or less in a 24 hour period. This detention structure will also precipitate out as much as 78% of the particulate phosphorus and kill 90% of the fecal coliform bacteria. The combination sediment trap/nutrient filters on Hanna B. Walker drain and Kuhn ditch will remove up to 50% of the suspended solids, 36% of the total phosphorus, and 24% of the total nitrogen within the stream. The second sediment

trap proposed on Hanna B. Walker will eliminate an additional 50% of the suspended sediment levels in Hanna B. Walker drain.

The total effect on the lake from all four of the proposed projects will likely be a 3 to 5% reduction in phosphorus and nitrogen loading and up to 30% reduction in suspended solids. As a comparison, a sewer system would remove a predicted 3 to 5% of the phosphorus and nitrogen and none of the suspended solids.

### STATEMENT OF PROJECT PURPOSE

The purpose of the feasibility study is to review and examine the recommendations proposed in the diagnostic study and determine the feasibility and function of each structure. A project is determined to be feasible if it addresses the needs of the Lake Association, is cost effective, and formal agreements are obtained which allows for final design and construction to proceed.

### PROJECT DESCRIPTIONS

The following projects are reviewed throughout this document and are listed in the order of the most feasible to the least feasible as determined by this study.

**Project Number 1** is the construction of two detention basins at the upper end of Indian Creek. Indian Creek begins at a series of drain tile outlets on the south edge of Fairway #2 on the Tippecanoe Country Club. These tiles drain over 100 acres with combined outlets of over 100 inches in diameter. The resulting flow after a storm event carries a heavy load of fecal coliform bacteria and phosphorus to Lake Tippecanoe as well as causing severe erosion in the steeply sloped drainage. The dry bottom detention structures are designed to hold a 10 year storm event for 24 hours while releasing it downstream through a 10 inch diameter pipe on each structure. The purpose of this project is to kill fecal coliform bacteria, precipitate phosphorus and reduce downstream erosion.

**Project Number 2** is the sediment trap built into the mouth of the Hanna B. Walker ditch. Hanna B. Walker ditch delivers nearly 30% of the sediment load to Lake Tippecanoe according to the diagnostic study. The sediment trap is constructed by widening and deepening a 80 foot by 45 foot area within the existing ditch. Riprap will be used to stabilize the upstream end and PVC sheet pile will be used to stabilize the east bank and area of work. The purpose of this structure is to remove at least 50% of the TSS. The project will require annual maintenance.

**Project Number 3** is the excavation of a sediment trap and wetland filter along Hanna B. Walker ditch just north of C.R. 650. This project would excavate a sediment trap in the existing ditch 250 feet long and 30 feet wide. Adjacent to the sediment trap, a one acre wetland floodplain will be excavated and planted with various wetland plants. The purpose of this structure is to remove sediments and phosphorus from the water column, by slowing down the water and directing a majority of the storm water flow through wetland vegetation.

**Project Number 4** is another sediment trap and wetland filter on Kuhn ditch north of 600 North Road and south of the wastewater treatment plant. The project as currently developing would involve excavating a sediment trap for high flows within an existing gravel pit adjacent to Kuhn ditch. The remainder of the gravel pit would be vegetated to filter the storm flows and retain summertime phosphorus before flowing back into the normal channel.

# I.

# **DIAGNOSTIC**

# **STUDY**

# **UPDATE**

LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

# I. Diagnostic Study Update

The 1997 Diagnostic Study was reviewed with regard to the data summary and the proposed solutions. Phosphorus is identified as being the limited nutrient in the Lake Tippecanoe system. The excess phosphorus and suspended sediment loads have continued to decrease the water clarity and oxygen supplies in the lake during the past decade.

The study results show that the largest volume of nutrients and sediment are coming from Tippecanoe River and Grassy Creek, however, the large size of the watersheds (>50 square miles each) prohibits a specific project of a feasible nature that would be beneficial. Instead, the study recommends supporting the Soil & Water Conservation District (SWCD) projects throughout the watershed in attempts to reduce loading from each of the smaller drainages leading into Grassy Creek or the Tippecanoe River.

The highest concentrations of nutrients and sediment were coming from four tributaries located to the North of the lake. The Rich Creek/Long Ditch watershed was not chosen for a project site due to the belief that the main flow was not channelized all the way to the lake. This conclusion has since been proven wrong; the main flow diverts eastward before reaching the lake and flows out through a channel at Mrs. Long's campground. In addition, the flow of water from the Rich Creek farm has since been channelized through a silver maple swamp that used to absorb most of the sediments. This channelized flow will bring greater amounts of nutrients and additional sediment directly into Lake James. It is recommended that the Association continue to work with SWCD, and two property owners to control and filter the runoff from the Rich farm pasture.

The study concludes that projects should be developed on Indian Creek, Hanna B. Walker Ditch and Kuhn Ditch which will reduce peak flows, while trapping sediments and nutrients. The review of data provided supports the original conclusions.

II.

# PROGRESS REPORT

LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

## II. Progress Reports

The feasibility project was officially begun in January of 1998. Attached are project reports from January through October 1998. Three public meetings, two private property owner meetings, and two agency meetings were held between April and June in addition to all the on-site sampling work that was completed. A minimum of three contacts were made with each landowner to continue the cooperative relationships that were first established in January of 1998. The feasibility study was completed in October of 1998. Design/Build funding was applied for and received in 1998 with the understanding the money would be used to construct one or more of the projects developed within this feasibility study.



John R

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FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement

3955 Eagle Creek Parkway, Suite E Indianapolis, Indiana 46254 Phone: 317-388-1982

one: 317-388-1982 Fax: 317-388-1986

December 11, 1997

Tippecanoe Environmental Lake and Watershed Foundation c/o Holly LaSalle
Chairman T-by-2000 Committee
67 EMS T49A Lane
Syracuse, Indiana 46567

Dear Holly:

The attached contract represents the changes made to our proposal at the 4 December 1997 meeting with the IDNR Lake and River Enhancement staff. As we discussed throughout our meeting, the budget will remain flexible as long as the indicated tasks are completed to the satisfaction of the LARE staff and the Foundation. The end result of this contract is to produce a document that assures this project can move into the final design phase without significant obstacles to overcome.

Of primary concern will be social acceptance of the projects, environmental concerns of permitting agencies, and whether or not the projects can be economically justified by treatment expectations.

The final document will briefly review the diagnostic study results, document any significant changes to the watershed, document results of meetings with the regulators and public, and will further refine the proposed project plan and locations, their expected treatment results and costs.

Thank you for selecting J.F. New & Associates for this phase of the Lake Tippecanoe enhancement project.

Sincerely,

John Richardson Project Manager

Will D. Ditzler

Principal, Business Director

c: V Mike Massonne, IDNR Division of Soil Conservation



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12 January 1998

Holly LaSalle
Tippecanoe Environmental Lake and Watershed Foundation
67 EMS T49A Lane
Syracuse, Indiana 46567

RE: Monthly report - LARE Grant Feasibility Study

Dear Ms. LaSalle:

During December, 1997 we met with the IDNR Lake and River Enhancement staff to review the scope of work proposed for this phase of the project. It was agreed by all present that the budget would remain flexible as long as the 19 areas of concern identified by the IDNR staff were thoroughly addressed in the final report. We then finalized a contract.

Prior to developing any additional engineering plans we agreed to establish communication with landowners along the targeted streams where construction of the proposed sediment traps and nutrient filters is feasible. It is our goal to identify two landowners along each of three streams who will work with us by the end of January. We have had conversations with five landowners, and have permission to begin preliminary work on two properties, Mr. Gilbert's, on Hannabe-Walker drain and Mr. White, on Kuhn Ditch. Surveys and preliminary construction cost estimates of the previously designed structures will be completed upon a favorable response from one more landowner. We hope to complete this task by the end of January and submit the project to the LARE staff for design build funding.

Sincerely,

J. F. New and Associates, Inc.

John B. Richardson Project Manager

c. IDNR -Massone
SWCD - Sam St. Claire
Kosciusko County Surveyor - Richard Kemper
JFNA - Gina Weilbaker, File 95-08-2201



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10 February 1998

Holly LaSalle Tippecanoe Environmental Lake and Watershed Foundation 67 EMS T49A Lane Syracuse, Indiana 46567

RE: Monthly report - LARE Grant Feasibility Study

Dear Ms. LaSalle:

During January, 1998 we concentrated on contacting landowners and getting permission to access properties for surveys. We ended up with permission to access four different properties on the three streams and ordered the required surveys from Bradsko surveying. In addition, we submitted a request to the L.A.R.E. program to fund design and construction and scheduled a meeting with all involved regulatory personnel to review the proposed projects.

The landowners who are willing to work with us to date include Mr. Gilbert and Mr. Clay on Hannabe-Walker drain, Mr. White on Kuhn Ditch, and the Tippecanoe Country Club on Indian Creek. The survey information should be available by the end of February on these parcels. Once the survey is received we will develop conceptual drawings of the proposed structures for presentation to each landowner and at the proposed public meetings between March and May. The regulatory review meeting is scheduled for March 10.

February's agenda includes obtaining the survey, completing presentation quality conceptual designs, and setting the dates for the public meetings. The project is going smoothly to date due to your continuous cooperation and communication. Thank you for your assistance.

Sincerely,

J. F. New and Associates, Inc.

John B. Richardson
Project Manager

IDNR -Massone SWCD - Sam St. Claire Kosciusko County Surveyor - Richard Kemper JFNA - Gina Weilbaker, File 95-08-2201



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11 March 1998

Holly LaSalle Tippecanoe Environmental Lake and Watershed Foundation 67 EMS T49A Lane Syracuse, Indiana 46567

RE: Monthly report - LARE Grant Feasibility Study

Dear Ms. LaSalle:

During February, 1998 we concentrated on getting surveys of the potential construction sites and setting up the public meetings. Brads-Ko Engineering and Surveying of Goshen, Indiana is currently finishing up the survey work and should have that information to me by the end of the month. You tentatively set the public meeting dates as Tuesday April 23, at 7 pm, Saturday May 9, at 9 am and Monday June 15, at 7 pm in the North Webster community building. The agenda at these meetings will be to present a conceptual view of the designs on all three waterways to the property owners around the lake and document their response and comments.

Our scheduled meeting with all involved regulatory personnel to review the proposed projects was postponed until April 6th due to bad weather.

March's agenda includes obtaining the survey and completing presentation quality conceptual designs in preparation for the public meetings. The project continues to go smoothly thanks to your continuous cooperation. Thank you for your assistance.

Sincerely,

J. F. New and Associates, Inc.

John B. Richardson

Project Manager

c. IDNR -Massone
SWCD - Sam St. Claire
Kosciusko County Surveyor - Richard Kemper
JFNA - Gina Weilbaker, File 95-08-2201



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13 April 1998

Holly LaSalle Tippecanoe Environmental Lake and Watershed Foundation 67 EMS T49A Lane Syracuse, Indiana 46567

RE: Monthly report - LARE Grant Feasibility Study

Dear Ms. LaSalle:

During March, 1998 surveys of the potential construction sites were conducted. BradsKo Engineering and Surveying of Goshen, Indiana has provided surveys on the Richard Clay and Richard White property. We are still waiting for the survey work on the Country Club and Kevin Gilbert Property. I have subcontracted for artistic renderings of the proposed treatment options on the various creeks for presentation at the Country Club Board meeting this Thursday and the three public meetings on April 23, May 9, and June 15. The purpose of these meetings will be to document the property owners responses to the proposed projects.

The meeting with regulatory personnel to review the proposed projects occurred April 6th. The meeting was attended by Keith Poole and Jed Pearson from the IDNR Division of Fish and Wildlife, Elizabeth McCloskey form the U.S. Fish and Wildlife Service and Randy Jones from the Indiana Department of Environmental Management. Their responses were favorable at all proposed locations.

Thank you for your continued assistance and cooperation.

Sincerely,

J. F. New and Associates, Inc.

John B. Richardson Project Manager

IDNR -Massonne SWCD - Sam St. Claire Kosciusko County Surveyor - Richard Kemper JFNA - Gina Weilbaker, File 95-08-2201



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29 June 1998

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Phone: 317-388-1982 Fax: 317-388-1986

Mike Massonne IDNR Division of Soil Conservation 402 W. Washington Street W-265 Indianapolis, Indiana, 46204

RE: Lake Tippecanoe - Design/Construction -Funding request update

Dear Mr. Massonne:

Enclosed are seven copies of the draft feasibility study to support the Lake associates request for additional design and construction funding under the Lake and River Enhancement program. Please note the last page of the study which gives an updated and accurate cost estimate for the proposed projects. The \$269,000 request for design and construction will complete the proposed projects by the fall of 1999. The Foundation has raised \$70,000 to date to support these project and set up a permanent maintenance fund.

While the draft document enclosed will not be completed until August, due to additional survey work, soil borings, and final lease agreements, the project is far enough along at this point that we do not want to wait an additional year for final design and construction funds. The Foundation will want to proceed to final design in August with construction planned for January through October of next year.

Please give this project your utmost consideration for continued funding through the LARE program. Thank you for your continued assistance.

Sincerely.

J. F. New and Associates, Inc.

John B. Richardson Project Manager

c. SWCD - Sam St. Claire JFNA File 95-08-2201





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30 June 1998

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Holly LaSalle Tippecanoe Environmental Lake and Watershed Foundation 67 EMS T49A Lane Syracuse, Indiana 46567

RE: Monthly report - LARE Grant Feasibility Study

Dear Ms. LaSalle:

During the previous two and half months - three public meetings were held, presentations were made to the Tippecanoe Country Club Board and the Drainage Board with conceptual renderings and designs of all of the proposed projects. The meetings were successful in securing general approval from all property owners affected and the Drainage Board. Representatives of the IDNR and IDEM who met with me on site in April reviewed the plans and called to say that they are in support of the proposed projects. In addition to the meetings, all sites were visited for a wetland and vegetative survey, habitat inventory and to document the environmental consequences of the proposed structures. The above work is summarized and included in the Draft Feasibility Study which was completed on June 29 and mailed to the IDNR to update the request for design and construction funding. While this draft is incomplete for several of the 18 required sections, it serves the purpose of letting the funding committee know that we have advanced far enough along in the study to warrant continued funding next January. The cost estimates for the design and permitting have not changed and the construction costs should be adequate as they were reviewed by a construction contractor. We have 4 separate projects proposed and each land owner is committed to working with us on final designs and easements.

Our Feasibility budget included \$4,675 for soil boring information and \$9,984 for HEC modeling. I have questioned our engineering staff on the need for the number of soil borings and HEC models budgeted. I am waiting for their official response which involves IDNR inquiry. I would like to use some of that money for the additional survey required on the White property (Kuhn Ditch) where we have moved the project. It will likely take three months to get the additional survey.

Once the survey has been obtained I will complete the revised conceptual design plans for the Kuhn Ditch project and the final draft of the Feasibility Study. I hope to complete a more technically accurate and concise document by September 1998.

Between now and September I need to continue to update the Feasibility Study Report sections as information becomes available. One of our primary focuses should be to settle the Tom farm issue for Mr. Clay and obtain written agreements or easements on the subject properties. Marsha McNabney should pursue official agreements with the Country Club and the Gilberts as I believe those projects are close enough to final design to warrant an agreement. If more detail is needed in the drawings of the projects please let me know and I will provide them. We should hold off on agreements for the Clay and White properties until we have worked out the additional issues.

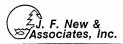
Once again, thank you for your continued involvement and dedication to this project.

Sincerely,

J. F. New and Associates, Inc.

John B. Richardson Project Manager

c. IDNR -Massonne
 SWCD - Sam St. Claire
 Kosciusko County Surveyor - Richard Kemper
 JFNA - Gina Weilbaker, File 95-08-2201





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25 August 1998

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Mike Massonne IDNR Division of Soil Conservation 402 W. Washington Street W-265 Indianapolis, Indiana, 46204

### Dear Mike:

The following is a proposed Scope of Services outline for the Lake Tippecanoe projects design and construction phase. The projects include the detention structures on Indian Creek at the Tippecanoe Country Club and the sediment trap on the Gilbert property. As conceptually designed in the draft feasibility study, the design, permitting and construction of these projects can be completed within the \$75,000 grant and the required matching funds from the Foundation.

- I. Provide review and final designs of plans presented with the Lake Tippecanoe Feasibility Study. Include specifications and a final design document with maintenance and monitoring plans.
- II. Obtain all required federal, state and local permits as applied for within the Feasibility Study.
- III. Provide bid administration and on-site supervision of all construction activity. Submit all construction supervison documentation to Lake Tippecanoe Foundation and LARE staff. Submit completion reports as required by permits.
- IV. Select contractor to provide all labor, equipment and materials to complete the project within the allocated budget.

This is provided for your use in developing the final project scope and is directly tied to the attached letter. Thank you for your immediate attention to this matter, as the Tippy Foundation is hoping to have this next phase bid out by October 1, 1998.

Sincerely,

J. F. New and Associates, Inc.

John B. Richardson Project Manager

c. Holly LaSalle



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25 August 1998

Holly LaSalle Tippecanoe Environmental Lake and Watershed Foundation 67 EMS T49A Lane Syracuse, Indiana 46567

RE: LARE Grant Feasibility Study

Dear Ms. LaSalle:

This letter serves to summarize the changed Scope of Services to be completed under the existing Feasibility Study contract between J. F. New and Associates (New) and the Tippecanoe Environmental Lake and Watershed Foundation (Foundation). We have discussed all of these changes in various conversations, however, in order to make a clean transition from the feasibility report to the next funded phase we need a written agreement of which tasks can most efficiently be completed in the feasibility report and which will be completed in the following phase. The feasibility report will be completed in September 1998. The following proposal was discussed with Jim Ray, Chief - IDNR Division of Soil Conservation who gave his conceptual approval.

Due to the lack of necessity for the HEC models, we have an additional \$9,984.00 that can be applied to more urgent needs. We are proposing that this money be utilized for: additional onsite meetings, final engineering designs (without bid package and specifications) and submittal of all necessary permit applications for construction of the Indian Creek detention structures and the Gilbert sediment trap. This would allow for a competitive design-build bid from consultants and allow the proposed projects to be completed in the Spring of 1999 with the secured funding.

Tasks to be included in the next phase include: obtaining an additional survey for the Kuhn Ditch project on Mr. White's property and modifying the conceptual plan to fit the new area; following up with and obtaining the submitted permits; reviewing and revising the engineering plans as necessary; and finish the design report - including specifications, maintenance and monitoring plans for the funded projects.

Mr. White has requested that the Kuhn Ditch project be relocated into the existing pit on his property, creating the need for additional survey work and conceptual drawing modifications. The reason for completing the feasibility of the Kuhn Ditch project under the next phase is two fold. First, it cuts the cost of the new survey in half with better field surveying conditions in winter, and, by transferring that cost to the next phase, allows the use of existing contract funds for completion of permitting and design work on the funded structures, in time for the construction window of January through March 1999.

Lake Tippecanoc Feasibility Study

Page 2

Assuming the IDNR comments on the draft report soon, we will modify and update the feasibility report with the soil boring results, additional engineering calculations, permit applications and engineering drawings by the end of September. This will officially end J.F. News contract for the Feasibility Study and we will invoice it at 100%. The next phase can then be competitively bid as required by the Lake and River Enhancement program.

Please indicate by separate letter or signature of this letter the Foundations acceptance of the above changes. If the Foundation does not agree, please make written comments on the above so that we can bring closure to this contract and allow the IDNR to set up the new scope of services for the next phase.

Sincerely,

J. F. New and Associates, Inc.

For Tippecanoe Lake and Watershed Foundation

John B. Richardson Project Manager

c. Jim Ray - IDNR Division of Soil Conservation



### Indiana Department of Natural Resources

Frank O'Bannon, Governor Larry D. Macklin, Director

Division of Soil Conservation 402 W. Washington Street W265 Indianapolis, IN 46204-2739 PH: 317/233-3870 FAY: 317/233-3820

September, 1998

Holly Lasalle Tippecanoe Environmental Lake and Watershed Foundation 67 EMS T49A Lane Syracuse, IN 46567

Dear Holly:

I am responding to your consultant's proposal regarding extended services for the Lake Tippecanoe Lake and River Enhancement (LARE) Engineering Feasibility Study. I feel that utilizing remaining funds as described by John Richardson, J.F. New and Associates, in his letter, dated August 25, 1998, is an effective method of maintaining project momentum necessary to meet required construction deadlines. It is critical to immediately address and submit needed environmental permit applications and your consultant is, at this point, well attuned to specific environmental regulatory needs and can readily address this issue.

At this time, your Project Manager should formalize his proposal and submit it for your and LARE program approval. The proposal should list what the extended services will include and clearly define a stopping point appropriate for requesting additional proposals for the completion of the design/construction phase of this project. This requested information will be used to generate the language for the next needed scope of services or task list

If complete, the LARE Engineering Feasibility study can be presented for approval to the State Soil Conservation Board (SSCB) at their November, 1998, meeting. I hope at that time to also present a recommendation to the Board for completion of the LARE Design/Construction project phase. There should be sufficient time to request, review, and accept a project proposal for this last phase prior to the Board's November meeting. I understand you will leave for an extended stay in Florida on October 16, 1998. Unfortunately, I regret that it may be necessary for you to communicate and correspond, regarding this matter, from your Florida retreat. However, as in the past, your continued perseverance will assure project success.

John Richardson has indicated that the Engineering Feasibility study is on target and will soon be available for final review. I look forward to completion of this study and the final design and construction of projects along Indian Creek and the Ditches Kuhn and Hannabe-Walker.

I have copied this letter to your consultant and will be speaking with them regarding their extended services proposal and project completion. If you have any questions regarding this matter, please contact me at (317) 233-3873. Thank you for participating in Indiana's Lake and River Enhancement program.

Sincerely,

Michael Massonne LARE Project Engineer

pc: John Richardson, J.F. New and Associates

Jim Ray, IDNR

# III.

# POTENTIAL CONSTRUCTION SITES

LAKE TIPPECANOE FEASIBILITY STUDY KOSCIUSKO COUNTY, INDIANA

### III. Potential Construction Sites

Project sites reviewed were limited to the three streams targeted for treatment by the Diagnostic Study. The Indian Creek waterway is owned entirely by three landholders. One individual owns approximately two acres at the outlet of the stream into Lake Tippecanoe. The majority of the creek is a steeply sloped mature wooded parcel that has been bequeathed to The Nature Conservancy. The Tippecanoe Country Club owns the property at the headwaters. The lakefront property adjacent to the Tippecanoe River is a developed and landscaped parcel which would not physically be acceptable to a structure of adequate size and would not solve the erosion problem occurring upstream. While the center property is considered to have ideal topography to address identified problems; construction easements are unattainable for various reasons including that it is currently a valuable environmental asset. The Tippecanoe Country Club property was identified as the source of much of the nutrient and increased peak flows which cause erosion downstream. Therefore, the Country Club property is an ideal location to propose structures that would reduce peak flows, trap nutrients, and kill harmful bacteria.

The Hanna B. Walker Ditch has six property owners. The upper watershed is well protected in notill, grassed waterways and 30 foot buffers which has resulted in very little erosion problems. The county legal drain begins adjacent to 500 East at 650 North, crosses south under 650N and parallels 650N until crossing back to the north and meeting the natural drainage on the north side.

Sites considered for construction due to their physical location near the source of the sediments were the properties adjacent to C.R. 650 North. One property owner has cooperated on disposal of dredge spoils in the past and they were open to locating any structures on their property. Due to environmental reasons, the physical location that was offered was not large enough to support a proposed combination wetland filter and sediment trap. However, a secondary, or back up sediment trap, is feasible within the environmental constraints posed by the site. Therefore, this site was selected for a potential 0.25 acre sediment trap. A second property owner was not approached for the use of her property. A third property owner contacted the consultant after speaking with the local SWCD. This property is ideally suited to locating the sediment trap and nutrient filters, therefore, this site was selected.

The Kuhn Ditch treatment was proposed north of the Tippecanoe River and south of the wastewater treatment plant for North Webster. Three property owners own the length of the stream in this section. The property owner adjacent to the Tippecanoe River at the outlet offered his property. Unfortunately, upon investigation, the area surrounding the stream was forested wetland and would require the loss of a functioning wetland in order to get additional treatment. Therefore, it was rejected. One property owner south of 600 and north of Tippecanoe River was contacted (via letter) and did not respond. It was felt that the steeply sloped wooded banks presented too great an environmental and physical hurdle to overcome. The third property owner, north of 600N and south

of the wastewater treatment plant, offered ideal grades, with mature pastured woods or agricultural ground adjacent to the ditch. As a result, this site was selected.



FAX: 219-586-3446

3955 Eagle Creek Parkway, Suite E

Indianapolis, Indiana 46254

Phone: 317-388-1982

Fax: 317-388-1986

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Blological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement

23 December 1997

C. Katherine White C/O Richard White 16630 North 30th Avenue Phoenix, Arizona 85023

Re: Access permission to property in Kosciusko County, Indiana

According to the records of the surveyor, Kosciusko County, Indiana you are the owner of a parcel of ground north of 600 North and east of 675 East road, near North Webster, Indiana. The parcel is bisected by Kuhn ditch which is under the jurisdiction of the Kosciusko County Drainage Board. J. F. New and Associates is under contract to complete an engineering feasibility study for the newly formed Tippecanoe Environmental Lake and Watershed Foundation (TELWF). This organization was formed to raise funds to pay for proposed improvements in several ditches that drain into Lake Tippecanoe. Kuhn Ditch is one of three ditches identified in an earlier study that is in need of sediment traps and nutrient filters.

Your property is one of several that are in a physically suitable location to construct these projects within the existing drainage board easement. Access is being requested from you and others along Kuhn Ditch in order to further investigate whether or not these improvements are feasible. Included in our investigation will be soil boring, surveying, and biological sampling at potential sites within the existing drainage board easement. However, it is of paramount importance that any proposed project be acceptable to you as the property owner. The project will not proceed without your permission and acceptance.

I have included a copy of the diagnostic study for your review. The study identifies several non-point sources of nutrients entering Lake Tippecanoe which contribute to decreasing water quality. Pages 71-75 are preliminary drawings of how a proposed structure would look on Kuhn Ditch. Please read the enclosed information and return the enclosed postage paid card which provides me with an opportunity to call and talk to you or gives me permission to proceed with our feasibility study on your property. I am looking forward to discussing this potential project with you and hope you will participate.

Thank you for your time taken to read the attached materials and respond to my request. The long term health of Lake Tippecanoe will depend upon landowners in the entire watershed supporting the efforts of TELWF and the local Soil and Water Conservation District.

Sincerely.

F. New and Associates, Inc.

John B. Richardson Project Manager

encl.

Richard Kemper - Kosciusko County Surveyor w/o encl.
 Holly LaSalle - Chairman TELWF T x 2000 Committee w/o encl.

File capy



FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement

3955 Eagle Creek Parkway, Suite E Indianapolis, Indiana 46254

Phone: 317-388-1982 Fax: 317-388-1986

23 December 1997

Homer Graber 6855 East 600 North North Webster, Indiana 46555

Re: Access permission to property in Kosciusko County, Indiana

According to the records of the surveyor, Kosciusko County, Indiana you are the owner of a parcel of ground south of 600 North and east of 675 East road, near North Webster, Indiana. Kuhn ditch, which is under the jurisdiction of the Kosciusko County Drainage Board, runs along your east property boundary. J. F. New and Associates is under contract to complete an engineering feasibility study for the newly formed Tippecanoe Environmental Lake and Watershed Foundation (TELWF). This organization was formed to raise funds to pay for proposed improvements in several ditches that drain into Lake Tippecanoe. Kuhn Ditch is one of three ditches identified in an earlier study that is in need of sediment traps and nutrient filters.

Your property is one of several that are in a physically suitable location to construct these projects within the existing drainage board easement. Access is being requested from you and others along Kuhn Ditch in order to further investigate whether or not these improvements are feasible. Included in our investigation will be soil boring, surveying, and biological sampling at potential sites within the existing drainage board easement. However, it is of paramount importance that any proposed project be acceptable to you as the property owner. The project will not proceed without your permission and acceptance.

I have included a copy of the diagnostic study for your review. The study identifies several non-point sources of nutrients entering Lake Tippecanoe which contribute to decreasing water quality. Pages 71-75 are preliminary sketches of how a proposed structure would look on Kuhn Ditch. The long term health of Lake Tippecanoe will depend upon landowners in the entire watershed supporting the efforts of TELWF and the local Soil and Water Conservation District. Please read the enclosed information and return the enclosed postage paid card which provides me with an opportunity to call and talk to you or gives me permission to proceed with our feasibility study on your property.

Thank you for your time taken to read the attached materials and respond to my request. I am looking forward to discussing this potential project with you and hope you will participate.

Sincerely,
J. E. New and Associates, Inc.
John B. Richardson
Project Manager

encl.

Richard Kemper - Kosciusko County Surveyor w/o encl.
 Holly LaSalle - Chairman TELWF T x 2000 Committee w/o encl.



FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement January 20, 1998

3955 Eagle Creek Parkway, Suite E Indianapolis, Indiana 46254 Phone: 317-388-1982

hone: 317-388-1982 Fax: 317-388-1986

Mr. Richard White 16630 N. 30th Avenue Phoenix, Arizona 85023

Dear Mr. White:

On behalf of the Tippecanoe Environmental Lake & Watershed Foundation (Foundation), thank you for allowing me access to your property for conducting a survey. This survey which will be used to develop preliminary design plans of a wetland filter and sediment trap on Kuhn Ditch. This letter documents the remainder of our schedule for completing a feasibility study involving all interested parties in the decision process.

We plan on having the proposed location of the structure surveyed within the next three weeks. I will call you when I know the surveyor's schedule and let you know when they will be there. After receipt of the survey, J. F. New's Environmental Engineers will draft preliminary design plans which will include exact positioning of these structures, details of components used, amount of land surface area required for the structure, and any additional access requirements. These plans are provided for your review and decision on whether to proceed.

Concurrent with your receipt of the preliminary plans in late February or early March, I will present these same plans to the regulatory agencies involved in permitting of these structures. Regulatory personnel may wish to visit the site. I will request they meet with me personally, and will inform you prior to their site visit.

We will also hold three public meetings between March and June in the Tippecanoe Lake area for the remainder of the property owners in the area to comment on the preliminary plans. During May, or early June, I will conduct a biological assessment for the proposed project area including sampling of stream dwelling organisms and bank vegetation as required by the state funding and permitting agencies. I will also inform you of this site visit.

Finally in June 1998, we hope to have your permission, as well as the general agreement of regulatory agencies and the Foundation to proceed with this project. We will be requesting final design and construction funds from the IDNR in June 1998, based on agreements reached at that time. Construction would not likely occur before spring 1999. All land use agreements, whether compensated or gifted to the Foundation, will be executed as a legal document prior to proceeding with final design specifications and construction documents. However, as a property owner your input will be utilized in the landscaping plans of the proposed structures. At any time you desire more information about our proposal or you wish a tour of similar projects, please contact me.

Sincerely,

J.F. New & Associates, Inc.

John Richardson Project Manager

cc: Holly LaSalle - Chair, TELWF - Tx2000 Committee Michael Massone, IDNR - Div of Soil Conservation

How



FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement 3955 Eagle Creek Parkway, Suite E Indianapolis, Indiana 46254 Phone: 317-388-1982 Fax: 317-388-1986

Mr. Blaire Clark Lake Tippecanoe Country Club 7245 North Kalorama Road Leesburg, Indiana 46538

Dear Mr. Clark:

On behalf of the Tippecanoe Environmental Lake & Watershed Foundation (Foundation), thank you for allowing us access to the Country Club for conducting a survey. This survey which will be used to develop preliminary design plans for the proposed detention areas. This letter documents the remainder of our schedule for completing feasibility study and involving all interested parties in the decision process.

We plan on having the proposed locations of structures surveyed within the next three weeks. I will call you when I know the surveyor's schedule and let you know when they will be there. After receipt of the survey, J. F. New's Environmental Engineers will draft preliminary design plans which will include exact positioning of these structures, details of components used, amount of land surface area required for the structure, and any additional access requirements. These plans will be provided for yourself and Jim to review prior to the March board meeting.

Concurrent with your receipt of the preliminary plans in late February or early March, I will present these same plans to the regulatory agencies involved in permitting of these structures. Regulatory personnel may wish to visit the site. I will request that they meet with me personally, and will inform you prior to their site visit.

I will also hold three public meetings between March and June in the Tippecanoe Lake area for the remainder of the property owners in the area to comment on the preliminary plans. During May, or early June, I will conduct a biological assessment for the proposed project area including sampling of stream dwelling organisms and bank vegetation as required by the state funding and permitting agencies.

Finally in June 1998, we hope to have your permission, as well as the general agreement of regulatory agencies and the Foundation to proceed with this project. We will be requesting final design and construction funds from the IDNR in June 1998, based on agreements reached at that time. Construction would not likely occur before spring 1999. All land use agreements, whether compensated or gifted to the Foundation, will be executed as a legal document prior to proceeding with final design specifications and construction documents. However, as a property owner your input will be utilized in the landscaping plans of the proposed structures. At any time you desire more information about our proposal or you wish a tour of similar projects, please contact me.

Sincerely.

J.F. New & Associates, Inc.

John Richardson Project Manager

cc: Holly LaSalle, Chair, TELWF - Tx2000 Committee Michael Massone, IDNR - Div of Soil Conservation

4 EW



FAX: 219-586-3446

3955 Eagle Creek Parkway, Suite E

Indianapolis, Indiana 46254

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January 20, 1998

Mr. Kevin Gilbert 5413 East 650 North Syracuse, Indiana 46560 Leesburg, Indiana 46538

Dear Mr. Gilbert:

On behalf of the Tippecanoe Environmental Lake & Watershed Foundation (Foundation), thank you for allowing me access to your property for conducting a survey. This survey which will be used to develop preliminary design plans for a wetland filter and sediment trap in Hannabe-Walker Ditch. This letter documents the remainder of our schedule for completing a feasibility study involving all interested parties in the decision process.

We plan on having the proposed location of the structure surveyed within the next three weeks. I will call you when I know the surveyor's schedule and let you know when they will be there. After receipt of the survey, J. F. New's Environmental Engineers will draft preliminary design plans which will include exact positioning of these structures, details of components used, amount of land surface area required for the structure, and any additional access requirements. These plans will be provided for your review and decision on whether to proceed.

Concurrent with your receipt of the preliminary plans in late February or early March, I will present these same plans to the regulatory agencies involved in permitting of these structures. Regulatory personnel may wish to visit the site and I will request that they meet with me personally, so that I may inform you prior to their site visit.

I will also hold three public meetings between March and June in the Tippecanoe Lake area for the remainder of the property owners in the area to comment on the preliminary plans. During May, or early June, I will conduct a biological assessment for the proposed project area including sampling of stream dwelling organisms and bank vegetation as required by the state funding and permitting agencies. I will also inform you of this site visit.

Finally in June 1998, we hope to have your permission, as well as the general agreement of regulatory agencies and the Foundation to proceed with this project. We will be requesting final design and construction funds from the IDNR in June 1998, based on agreements reached at that time. Construction would not likely occur before spring 1999. All land use agreements, whether compensated or gifted to the Foundation, will be executed as a legal document prior to proceeding with final design specifications and construction documents. However, as a property owner your input will be utilized in the landscaping plans of the proposed structures. At any time you desire more information about our proposal or you wish a tour of similar projects, please contact me.

Sincerely,

J.F. New & Associates, Inc.

John Richardson Project Manager

cc: Holly LaSalle, Chair TELWF - Tx 2000 committee Michael Massone, IDNR - Div of Soil Conservation





FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement • Ecological Restoration 13 April 1998

3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982

Fax: 317-388-1986

Mr. Richard Clav 104 N. Chevene Drive Warsaw, Indiana 46580

RE: Lake Tippecanoe - Feasibility Study North Webster, Indiana

Dear Mr. Clav:

It has been several months since I have communicated with you regarding the proposed use of a portion of your property along Hannabe-Walker Drain, north of Lake Tippecanoe for a wetland filter and sediment trap. This structure would serve to improve water quality in Lake James and Lake Tippecanoe. This letter serves to update you with our progress since February. Your continued cooperation is greatly appreciated.

The surveyors took longer than anticipated to complete the survey work of which I have enclosed a copy for your use. This survey was required in order to develop conceptual plans which could be presented for your approval prior to proceeding with final designs and permitting. I recently subcontracted with a graphic artist to develop a perspective drawing of what the proposed structure will look like when constructed. These drawings should be completed within the next several weeks. As soon as this is available I will mail a copy to you for your review.

After you have reviewed the conceptual drawings, please call me and we will set up a meeting to discuss your concerns and design needs, and how we can work them in to the final design plans. Final designs will not occur until after all comments from regulatory personnel, owners and adjacent property owners have provided input into the project.

A public meeting schedule has been arranged to obtain comments from those property owners adjacent to the proposed sites and those who will be funding the projects. You are invited to attend one or all of these meetings. The meetings are scheduled at the North Webster Community Center on April 23 at 7pm, May 9th at 9am, and June 15 at 7pm.

Again, we hope to have your permission to proceed with this project in late June. At any time you desire more information about our proposal or you wish a tour of similar projects, please contact me.

Sincerely.

J. F. New and Associates, Inc.

ohn B. Richardson

c. Holly LaSalle - Lake Enhancement Director Michael Massonne - IDNR, Division of Soil Conservation





FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement • Ecological Restoration April 13, 1998

3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1986 Fax: 317-388-1986

Mr. Richard White 16630 N. 30th Avenue Phoenix, Arizona 85023

RE: Lake Tippecanoe - Feasibility Study North Webster, Indiana

Dear Mr. White:

It has been several months since I have communicated with you regarding the proposed use of a portion of your property along Kuhn Ditch, in North Webster, Indiana. The proposed wetland filter and sediment trap would serve to improve water quality in Lake James and Lake Tippecanoe. This letter serves to update you with our progress since February. Your continued cooperation is greatly appreciated.

The surveyors took longer than anticipated to complete the survey work of which I have enclosed a copy for your use. This survey was required in order to develop conceptual plans which could be presented for your approval prior to proceeding with final designs and permitting. Since the survey was just recently obtained the schedule has been set back on the conceptual designs. I recently subcontracted with a graphic artist to develop a perspective drawing of what the proposed structure will look like when constructed. These drawings should be completed within the next several weeks. As soon as this is available I will mail a copy to you for your review.

Our public meeting schedule has been arranged to obtain comments from those property owners adjacent to the proposed sites and those who will be funding the projects. You are invited to attend one or all of these meetings. The meetings are scheduled at the North Webster Community Center on April 23 at 7pm, May 9th at 9am, and June 15 at 7pm.

Again, we hope to have your permission to proceed with this project in late June. At any time you desire more information about our proposal or you wish a tour of similar projects, please contact me.

Sincerely,

c:

J.F. New & Associates, Inc.

John Richardson Project Manager

> Holly LaSalle - Chair, TELWF - Tx2000 Committee Michael Massonne, IDNR - Div of Soil Conservation





FAX: 219-586-3446

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3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982

Fax: 317-388-1982

Richard White 10159 Topaz Drive Scottsdale, Arizona 85258

Re: Lake Tippecanoe Enhancement Project, Kuhn Ditch, Kosciusko County, Indiana

The Lake Enhancement project currently proposed for your property north of 650 North road is still in the conceptual design phase. Your input on location and final design layout is extremely important from this stage forward.

The proposed sediment trap has been sized to adequately handle up to 50% of the sediment load during an average year. This sediment trap by itself requires 0.5 acres including a 30 foot clean out access around the perimeter. The area calculation does not include an access drive. The designed filtration wetland for high flows was sized according to the available low topography along the stream allowing reasonable excavation. The proposed size of the wetland filter is approximately 0.5 acres. We are assuming access can be gained for maintenance of both of these structures through the existing farm field. Please let us know if we need to clarify a location for access on an easement lease for the future.

Thank you for participating in this proposal to date. In order to continue the funding from the Indiana Department of Natural Resources for final design and permitting, a lease agreement or letter of intention from the affected landowners is required. Attached is an example letter that will allow us to proceed with the project design as long as we continue to work with you on the final design location and details.

Official land lease agreements can be drafted at a later date. Please sign and return the attached letter of intention or a similar agreement and return it to me by June 24, 1998. Thank you very much for you cooperation to date.

Sincerely,

J. F. New and Associates, Inc.

John B. Richardson Project Manager

encl.

Richard Kemper - Kosciusko County Surveyor w/o encl.
 Holly LaSalle - Chairman TELWF T x 2000 Committee





FAX: 219-586-3446

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17 June 1998

Richard Clay 104 North Cheyene Drive Warsaw, Indiana 46580 3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982

one: 317-388-1982 Fax: 317-388-1986

Re: Lake Tippecanoe Enhancement Project, Kuhn Ditch, Kosciusko County, Indiana

The lake enhancement project proposed for your property north of 650 North road on the Hanna B. Walker Drain is still in the conceptual design phase. Enclosed is a copy of the most recent plans. As we discussed, we are continuing to work with Sam St. Claire of the SWCD and the Tom's to find a workable solution to the manure run-off your property has experienced in the past. The Tippecanoe Environmental Lake and Watershed Foundation will commit to purchasing the problem parcel from the Tom's if they allow that option. Your input on location and final design layout is extremely important from this stage forward. I have included a planting list specifically developed for your site. If there are additions or subtractions you would like please note them on the list and send it back to me at any time.

The proposed sediment trap has been sized to adequately handle up to 50% of the sediment load during an average year an is projected to require cleaning on a one year cycle. This sediment trap by itself requires approximately 0.2 acres. The area calculation does not include an access drive or a disposal area for excavated sediments. The designed filtration wetland for high flows was sized according to the available low topography along the stream that would allow for reasonable excavation without affecting existing wetland. The proposed size of the wetland filter is approximately 0.4 acres. The total area required for the project including access and disposal areas may be as much as two acres when final designs are completed. Please let us know if the proposed access drives are acceptable to you.

Thank you for participating in this proposal to date. In order to continue the funding from the Indiana Department of Natural Resources for final design and permitting, a lease agreement or letter of intention from the affected landowners is required. Attached is an example letter that will assist us in obtaining the funding to proceed with the project design. The letter requires that we will continue to work with you on the final design details and in your case, the issue addressed above. Official land lease agreements can be drafted at a later date when we have satisfied all the issues. Could you please sign return the attached letter of intention or a similar agreement and return it to me by June 24, 1998. Thank you very much for you cooperation to date.

Sincerely.

J. F. New and Associates, Inc.

John B. Richardson Project Manager

encl.

Richard Kemper - Kosciusko County Surveyor w/o encl.
 Holly LaSalle - Chairman TELWF T x 2000 Committee w/o encl.





3955 Eagle Creek Parkway, Suite A

Indianapolis, Indiana 46254

Phone: 317-388-1982

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June 19, 1998

Mr. Kevin Gilbert 5413 East 650 North Syracuse, Indiana 46560

Dear Mr. Gilbert:

The Lake Enhancement project currently proposed for your property south of 650 North road is approaching the final design phase. Your input and cooperation on the final design and easement is extremely important from this stage forward.

The proposed sediment trap has been sized to adequately handle up to 50% of the sediment load during an average year. This sediment trap by itself requires 0.1 acre including a 20 foot clean out access along the east side. The area calculation does not include an access drive or the disposal area for cleaning on a proposed annual basis. It is our understanding that the current contract you have with the LaSalles for disposal in the existing sediment basins can be renewed or extended to meet the needs of this project. Please let us know if we need to clarify a location for an access easement along your existing lane on the final lease documents.

Thank you for participating in this proposal to date. In order to continue the funding from the Indiana Department of Natural Resources for final design and permitting, a lease agreement or letter of intention from the affected landowners is required. Attached is an example letter that will allow us to proceed with the project design as long as we continue to work with you on the final design. Official land lease agreements can be drafted at a later date. Please sign and return the attached letter of intention or a similar agreement and return it to me by June 24, 1998. Thank you very much for you cooperation to date.

Sincerely,

J. F. New and Associates, Inc.

John B. Richardson Project Manager

encl.

Richard Kemper - Kosciusko County Surveyor w/o encl.
 Holly LaSalle - Chairman TELWF T x 2000 Committee





3955 Eagle Creek Parkway, Suite A

Indianapolis, Indiana 46254

Phone: 317-388-1982

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June 30, 1998

Mr. Richard White 10159 Topaz Drive Scottsdale, Arizona 85258

RE: Lake Tippecanoe Feasibility Study North Webster, Indiana

Dear Mr. White:

Thank you for promptly returning the general agreement for the use of your property in North Webster, Indiana for a sediment trap and wetland filter. Your continued cooperation is greatly appreciated. We were able to put together a draft feasibility report with a great amount of supporting documentation to request funding for final design, permitting and construction. The Lake Foundation hopes to build these projects next year if the funding is available.

Your idea to move the project into the gravel pit will work very well. I was able to visit the site after the Drainage Board hearing on June 25. They have granted us support to move ahead with final design. Approximately 165 feet of stream will have to be relocated to enter the northeastern arm of the existing pit and then exit back to the original channel through the northwest arm. Instead of vacating the original stream, the Drainage Board would prefer to extend their easement to include the new channel. This easement could match the Lake Foundation easement to cover the maintenance of the entire system. No tillable ground would be affected by this new channel, and in fact, most of the project would be in areas that are now wetlands or were wetlands prior to the downcutting of the creek.

The only trees that would be affected would be some smaller boxelders along the northeast edge of the existing gravel pit where we would excavate a ½ acre sediment trap. The existing basin is only about two feet deep and is choked with an underwater plant known as coontail. I suggest using an aquatic herbicide to control the coontail and plant the remainder of the open water basin (outside of the sediment trap) with a wide variety of native flowering plants that will be more beneficial and appealing. The total project cost including construction, bid administration and construction supervision is expected to be \$90,200.00 assuming on-site disposal of excavated materials. This represents a savings of approximately \$10-\$20,000 over the originally proposed project. I will try to arrange the additional survey work required in order to complete an adequate conceptual plan in the next several months.

I expect to obtain the survey and complete the new conceptual plan by September. I will provide you with this information and then we can work with the attorney on a final easement document.

Please let me know if you have additional concerns or ideas to assist with this project. Enclosed for your review and information is a conceptual plan on an aerial photograph and a proposed planting plan.

Sincerely,

J.F. New & Associates, Inc.

John Richardson Project Manager

enc.

c: Holly LaSalle - Chair, TELWF - Tx2000 Committee Michael Massonne, IDNR - Div of Soil Conservation Richard Kemper - Kosiusko County Drainage Board Sam St. Claire - Kosiusko County SWCD Chairman



FAX: 219-586-3446

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Phone: 317-388-1982 Fax: 317-388-1986

August 4, 1998

Mr. Blaire Clark Lake Tippecanoe Country Club 7245 North Kalorama Road Leesburg, Indiana 46538

RE: Proposed Detention Structures

Dear Mr. Clark:

The Lake Enhancement project proposed for the Country Club property has been approved for final design and construction funding by the IDNR. J. F. New and Associates is still under contract with the Tippecanoe Environmental lake and Watershed Foundation to complete the feasibility study. Thanks to your cooperation we are able to complete the final design and submit permit applications on your specific project within the existing budget. This will allow us the opportunity to complete construction during January through March of 1999.

Your comments on the detention basins are important to the final design. If you have any concerns please contact myself or Holly LaSalle within the next several weeks as final design is being completed. As more details are provided by our engineers I will forward these to you. In addition, I will be sending you and Marsha McNagny information on the boundary description of the area required for the easement agreement. Marsha is an attorney experienced in writing appropriate agreements with property owners. When she contacts you please work with her to complete the necessary legal paper work.

On behalf of the Tippecanoe Environmental Lake & Watershed Foundation (Foundation), thank you for the continued cooperation of the Tippecanoe Country Club.

Sincerely.

.E. New & Associates, Inc.

John Richardson Project Manager

cc: Holly LaSalle, Chair, TELWF - Tx2000 Committee Marsha McNagny

File copy



3955 Eagle Creek Parkway, Suite E

Indianapolis, Indiana 46254

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August 4, 1998

Mr. Kevin Gilbert 5413 East 650 North Syracuse, Indiana 46560

Dear Mr. Gilbert:

The Lake Enhancement project proposed for your property south of 650 North has recently been approved for final design and construction funding. J. F. New and Associates is still under contract with the Tippecanoe Environmental lake and Watershed Foundation to complete the feasibility study. Thanks to your cooperation to date the budget allows for us to complete the final design and submit permit applications on your specific project. This will allow us the opportunity to complete construction during the winter season.

Your comments on the sediment trap are important to the final design. If you have any concerns please contact myself or Holly LaSalle within the next several weeks as final design is being completed. As more details are provided by our engineers I will forward these to you. In addition, I will be sending you and Marsha McNagny information on the boundary description of the area required for the easement agreement. Marsha is an attorney experienced in writing appropriate agreements with property owners. When she contacts you please work with her to come to a mutually beneficial agreement.

Thank you once again for your continued cooperation with the Foundation and myself.

Sincerely,

J. F. New and Associates, Inc.

John B. Richardson Project Manager

encl.

 Richard Kemper - Kosciusko County Surveyor w/o encl. Holly LaSalle - Chairman TELWF T x 2000 Committee Marsha McNagny

File cong



FAX: 219-586-3446

3955 Eagle Creek Parkway, Suite E.

Indianapolis, Indiana 46254

Phone: 317-388-1982

Fax: 317-388-1986

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement

5 August 1998

Richard Clay 104 North Chevene Drive Warsaw, Indiana 46580

Re: Lake Tippecanoe Enhancement Project, Hanna B. Walker Drain, Kosciusko County, Indiana

The Tippecanoe Environmental Lake and Watershed Foundation was granted a portion of the requested funding from the IDNR for 1999. The amount received is enough to complete a sediment trap on the Gilbert property and a detention structure on the Golf Course which will provide immediate and proven help to Lake Tippecanoe in reducing sediment and bacteria transport the lake.

Unfortunately, the proposed nutrient filtering wetland and sediment trap for your property north of 650 North road on the Hanna B. Walker Drain was not funded by the IDNR for 1999. However, the Foundation, has raised the necessary funds to continue working on the proposed structures and are confident that they will be funded for construction in the year 2000. In fact, I will likely proceed with permitting this fall, when we have satisfied your concerns with the Gary Tom farm.

J.F. New is still under contract to complete the feasibility study with an estimated completion date of September this year. When that document is completed I will send a copy to you for your information. Holly LaSalle and I intend to meet with Gary Tom soon to resolve your concerns. We will inform you of the outcome of that meeting. Thank you for continuing to participate in this proposal. We look forward to working through the necessary steps to implement the proposed structure on your property within the next 16 months.

Sincerely.

J. F. New and Associates, Inc.

John B. Richardson Project Manager

encl.

c. Richard Kemper - Kosciusko County Surveyor w/o encl. Holly LaSalle - Chairman TELWF T x 2000 Committee w/o encl.

File copy



FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement

August 5, 1998

3955 Eagle Creek Parkway, Suite E Indianapolis, Indiana 46254 Phone: 317-388-1986 Fax: 317-388-1986

Mr. Richard White 10159 Topaz Drive Scottsdale, Arizona 85258

RE: Lake Tippecanoe Feasibility Study, Kuhn Ditch, North Webster, Indiana

Dear Mr. White:

The Tippecanoe Environmental Lake and Watershed Foundation was granted a portion of the requested funding from the IDNR for 1999. The amount received is enough to complete a sediment trap on the Gilbert property and a detention structure on the Golf Course which will provide immediate and proven help to Lake Tippecanoe in reducing sediment and bacteria transport the lake.

Unfortunately, the proposed nutrient filtering wetland and sediment trap for your property north of 600 North road on the Kuhn Ditch was not funded by the IDNR for 1999. However, the Foundation has raised the necessary funds to continue working on the proposed structures and are confident that they will be funded for construction in the year 2000. In fact, I will likely proceed with permitting this fall, when we have satisfied all concerns on this specific site.

A problem brought to our attention just before the funding vote needs your input. According to a few locals, the gravel pit was used as a garbage dump for many years and thus, several people objected to our proposal to use it as a sediment trap and wetland filter. During my visit to the site, I did not see anything other than a few auto parts and old appliances which is nothing unusual for a farm property. What I saw would not present a hazard to us using the site and could be buried or hauled off at your discretion. Your comments on the history of disposal in this pit could help alleviate the local concerns.

J.F. New is still under contract to complete the feasibility study with an estimated completion date of September this year. It will include a new survey of the gravel pit on your property and the conceptual layout using the gravel pit as was discussed. When that document is completed I will send a copy to you for your information. Thank you for continuing to participate in this proposal. We look forward to working through the necessary steps to implement the proposed structure on your property within the next 16 months.

Sincerely,

J.F. New & Associates, Inc.

John Richardson Project Manager

c: Holly LaSalle, Michael Massonne, IDNR, Richard Kemper - Kosciusko County Drainage Board Sam St. Claire - Kocsiusko County SWCD Chairman

#### IV.

# **PRELIMINARY**

## **ENGINEERING**

## CALCULATIONS

LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

#### IV. Preliminary Engineering Calculations

The surveys and engineering calculations (attached) have indicated that the proposed projects will function as expected and there will be no major technical difficulties to overcome in the design, permitting, and construction phases. Geotechnical analysis of the sites including soil borings were conducted only at the Indian Creek site. The other sites did not require soil borings as they are structureless excavations and plantings. Conceptual drawings have been completed for all projects based on the results of these calculations and are included in Section VIII.

The engineering calculations used to size the structures for the Lake Tippecanoe facility were as follows:

A ten-year hydrograph was referenced to arrive at a peak flow of 23.5 cubic feet/sec. Of flow to each basin. The assumption was that each basin would received one-half of the rainfall. Using the flow characteristics and the yield of sediment to the basin, the basin was sized accordingly. The pipe was sized to a 10-inch diameter pipe using the Hazen-Williams Formula; this applies to both basin structures.

The spillway lengths were determined using conservative estimates of the total head of the basin depth. Due to the basin design, the spillway was specified at 10 feet for each structure.

The soil borings indicated that the proposed dam locations for the Indian Creek detention structures will not require any unusual construction methods.

PROJECT NAME:

#### SEDIMENT BASIN SIZING

FILE VERSION:

Lake Tippe - Gilbert Site

ON: 1.0 FILE NAME: SEDIMENT.WK4

STRUCTURE: SEDIMENT BASIN

FILE DATE: 11-Feb-98

To calculate the initial volume needed for a rectangular sediment basin, enter the following information:

Sediment Yield to Basin:	2550	tpy
Sediment Density:	100	lb/cf
Annual Sediment Load:	1.17	ac-ft/yr
Needed Volume of Basin:	0.29	ac-ft
Trapping Efficiency of Basin:	50%	
Annual Sediment Entrapment:	0.59	ac-ft/yr
Annual Sediment Accumulation:	1265	tpy
No. of Years to Fill Basin 100%:	0.5	years

To calculate the dimensions of the rectangular sediment basin, enter the following information and match basin volume:

Width at Top of Basin:	45	ft
Length at Top of Basin:	79	ft
Slope Ratio:	2	w/d
Depth of Basin:	5	ft
Width at Bottom of Basin:	25	ft
Length at Bottom of Basin:	59	ft
Volume to 100% of Basin:	0.29	ac-ft

#### SEDIMENT BASIN SIZING

FILE VERSION:

1.0

PROJECT NAME: STRUCTURE:

Lake Tippe - Hanna B. Walker FILE NAME: SEDIMENT.WK4 SEDIMENT BASIN

FILE DATE: 11-Feb-98

--- --- ----

To calculate the initial volume needed for a rectangular sediment basin, enter the following information:

Sediment Yield to Basin:	2550	tpv
Sediment Density:		lb/cf
Annual Sediment Load:	1.15	ac-ft/yr
Needed Volume of Basin:		ac-ft
Trapping Efficiency of Basin:	50€	
Annual Sediment Entrapment:	0.58	ac-ft/yr
Annual Sediment Accumulation:	1289	
No. of Years to Fill Basin 100%:	1	Years

To calculate the dimensions of the rectangular sediment basin, enter the following information and match basin volume:

Width at Top of Basin:	60	ft
Length at Top of Basin:	100	
Slope Ratio:	2	₩/d
Depth of Basin:	6	ft
Width at Bottom of Basin:	36	ft
Length at Bottom of Basin:	76	ft
Volume to 100% of Basin:	0.60	ac-ft

06/15/98

SED-KUN. WK4

#### SEDIMENT BASIN SIZING

FILE VERSION:

RSION: 1.0

PROJECT NAME: STRUCTURE: Lake Tippe - Kuhn Ditch SEDIMENT BASIN

FILE NAME: SEDIMENT.WK4 FILE DATE: 11-Feb-98

To calculate the initial volume needed for a rectangular sediment basin, enter the following information:

Sediment Yield to Basin:	3645	tpv
Sediment Density:		lb/cf
Annual Sediment Load:		ac-ft/yr
Needed Volume of Basin:		ac-ft
Trapping Efficiency of Basin:	50%	
Annual Sediment Entrapment:	0.82	ac-ft/yr
Annual Sediment Accumulation:	1822	tpy
No. of Years to Fill Basin 100%:	1	years

To calculate the dimensions of the rectangular sediment basin, enter the following information and match basin volume:

Width at Top of Basin:	70	ft	
Length at Top of Basin:	100	ft	
Slope Ratio:	. 2	w/d	
Depth of Basin:	7	ft	
Width at Bottom of Basin:	42	ft	
Length at Bottom of Basin:	72	ft	
Volume to 100% of Basin:	0.81	ac-ft	1

#### INDIAN CREEK DESIGN CALCULATIONS

#### ł. Discharge

The 10-yr hydrograph was used to determine a peak flow of 23.5 cfs to each basin (assuming each basin gets ½ of the rainfall). A peak outflow of 7.5 cfs provides a storage volume of 0.88 ac-ft. The outlet pipe was sized to provide the necessary 7.5 cfs under 2.5 ft of head. Both west and east ponds require a 10" diameter pipe. At normal conditions, assuming 0.5 ft head, the outflow will be around 3 cfs. See worksheets for more details.

#### 2. Spillway Dimensions

$$q = CLH^{3/2}$$

= Discharge (cfs)

Ċ - Coefficient

L = Length (ft)

н = Head (ft)

The equation was rearranged to solve for the length of the spillway necessary. Discharge was calculated assumming 5 ft of head to provide a conservative estimate.

$$L = \frac{q}{CH^{3/2}}$$

$$L = \frac{12.19 \ cfs}{3.2*1} = 3.81 \ ft$$
 West Pond

$$L = \frac{11.04 \text{ cfs}}{3.2*1} = 3.45 \text{ ft}$$
 East Pond

The length of the spillway must be at least the length indicated above to allow the maximum discharge through. I made the spillway 10 ft long.

The maximum water surface elevation was assumed to be 898. I placed the bottom of the spillway at 897.5 and placed 6" of 6" rip rap along the spillway providing a top of rip rap elevation at 898. Top of berm will be at 899, providing 1 foot of freeboard.

POND-2 Version: 5.17 S/N:

>>>> OUTFLOW HYDROGRAPH ESTIMATOR <

Inflow Hydrograph: 787 .HYD
Opeak = 23.5 cfs

Estimated Outflow: ESTIMATE.EST

Qpeak = T.S.CIR

Approximate Storage Volume (computed from t= 12.00 to 13.15 hrs)

0.9 acre-ft

Basin Sizing				
		FILE VERSI	on:	1.0
PROJECT NAME:	Lake Tippe - West		FILE NAME:	SEDIMENT.WK4
STRUCTURE:	Basin		FILE DATE:	11-Feb-98
Width	at Top of Basin:	70	ft.	
Length	at Top of Basin:	150	£t.	
Slope	Ratio:	3	w/d	
Depth	of Basin:	5	ft	
Width	at Bottom of Basin:	40	ft	
Length	at Bottom of Basin:	120	<u>f</u> t	
Volume	to 100% of Basin:	0.89	ac-ft	

#### 10/21/98

E\_basin.WK4



and III	SIBING			
PROJECT NAME: STRUCTURE:	Lake Tippe - East Basin	FILE VERSI	FILE NAME:	1.0 SEDIMENT.WK4 11-Feb-98
Leng Slop Dept Widt Leng	h at Top of Basin: th at Top of Basin: e Ratio: h of Basin: h at Bottom of Basin: th at Bottom of Basin: mme to 100% of Basin:	125 3 5 50 95	ft ft w/d ft ft ft ac-ft	

## WEST

Project Description		
Project File	c.\fmw\tip.fm2	
Worksheet	tip .	
Flow Element	Pressure Pipe	
Method	Hazen Williams Formula	
Solve For	Discharge	

Input Deta	
Pressure at 1	0.00 lbs/ln <sup>2</sup>
Pressure at 2	9.00 lbs/in <sup>2</sup>
Elevation at 1	2:50 ft
Elevation at 2	8.00 R
Length .	40:00 1
C Coefficient	140.0
Diameter	10.00 in

Results		
Discharge	8.38	cfs
Headloss	2.50	-R
Energy Grade at 1	3.45	<b>1</b>
Energy Greate at 2	0.65	₹:
Hydraulic Grade at 1	2.59	Ħ
hydraulic Grade at 2	0.00	R
Flow Area	0.55	Ħ²
Wetted Perimeter	2.62	Æ
Velocity	15.37	ft/o
Velocity Head	3.67	ft
Friction Slope	0.0625	00 <del>ft/ft</del>

WEST

Project Description	· · · · · · · · · · · · · · · · · · ·
Project File	e.\fmw\lip.fm2
<b>Vitorisheet</b>	tip .
Flow Element	Pressure Pipe
Method	Hezen-Williams Formula
Solve For	Discharge

0.00 tbs/in²
0:00 lbs/ln²
5.00 ft
# 00 ft
49.00 R
140.0
10.00 in

Results		
Discharge	12.19	- <b>⊆</b> f5
Headless	5.00	# -
Energy Grade at 1	8.67	Ħ.
Energy Grade at 2	3.67	Æ
Hydraulic Grade at 1	5.00	-R
Hydraulic Grado at 2	-0:20	£
Flow Area	8.55	<b>A</b> 2 €
Motted Perimeter	2:62	Ħ:
Velocity	22.35	12/3
Velocity Head	7.76	- <b>A</b>
Friction Slope	0.1250	00 ft/ft

Project Descripti	on
Project File	a:\fmw\tip.fm2
Werksheet	to
Flow Element	Pressure Pipe
Method	Hazen-Williams Formula
Solve For	Discharge

Input Data	
Pressure at 1	0:00 lbs/in²
Pressure at 2	-9.00 lbs/in <sup>2</sup>
Elevation at 1	0.50 ft
Elevation at 2	0.00 R
Length	49.00 ft
C Coefficient	140.0
Diameter	10.00 in

Results		
Discharge	3.51	cfs
Headioss	0.50	n.
Energy Grade at 1	1.03	<del>₽</del>
Energy Grade at 2	0.53	R
Hydraulic Grade at 1	0.50	A
Hydraulic Grade #12	0.90	÷₹.
Flow Area	0.55	₩.
Wetled Perimeter	2.62	· · ft .
Velocity	6.44	.∰e
Velocity Head	0.65	퀶
Friction Slope	0.0125	00 ft/ft

Project Descripti	08
Project File	-c:\fmw\tip.fm2
Marksheet	tip-
Flow Element	Pressure Pipe
Method	Hazen-Williams Formula
Solve For	Discharge

Input Data	
Pressure at 1	0.00 lbs/in²
Preseure at 2	0.00 iba/in²
Elevation at 1	2.50 ft
Elevation at 2	0:00 A
Length	48.00 ft
C Coefficient	149.0
Diameter	10.00 in

Results		
Dineburge	7.60	-cfs
leadloss	2.50	Ħ
Energy Grade at 1	5.38	R
Energy Grade at 2	2.88	<b>A</b>
hydraulic Grade et 1	2.50	Ħ
tydrautic Grade at 2	Ð:00	Ħ.
Tow Area	0.55	ff²
Netted Perimeter	2.62	Ħ
<del>Vetnoity</del>	13.93	N/B
Velocity Head	3.01	R
Friction Slope	0.0520	83 ft/ft

# Worksheet Worksheet for Pressure Pipe

Project Descripti	<b>95</b>
Project File	c.\fmw\tip.fm2
Warksheet	tip
Flow Element	Pressure Pipe
Method	Hezen Willams Formula
Solve For	Discharge

were eye .

Input Data	
Pressure at 1	0.00 lbs/in²
Pressure at 2	0.00 (bs/in²
Elevation at 1	±9.50 ft
Elevation at 2	8:00 A
Length	48. <del>3</del> 0 R
C Coefficient	140.0
Diameter	10.00 in

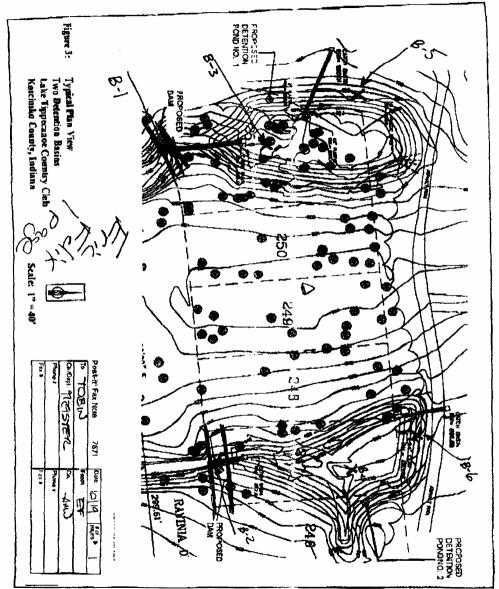
Rosutts		
Discharge	3.19	ofis
Headloss	0.50	1
Energy Grade at 1	6.87	æ
Energy Grade at 2	6.37	ft :
Hydraulic Grade at 1	0.50	R
Hydraulic Grade at 2	3.90	-ft
Flow Area	0:55	172
Wetted Purimeter	2.82	- स
Velocity	5.84	fVa
Velocity Head	0.53	R
Friction Slope	0.0104	17 fVft

### EAST

Project Descripti	00
Project File	c:\fmw\tip.fm2
Worksheet	tip ·
Flow Element	Pressure Pipe
Method	Hazen Williams Formula
Solve For	Pischarge

Q.00 lbs/in²
0.00 lbs/in <sup>2</sup>
5:00 ft
0.00 ft
48.00 ft
140.0
10.00 in

Results		
Dinaharga :	11.04	cts
Headloss	5.00	ft -
Energy Grade at 1	8.01	R:
Energy Grade at 2	3.01	ft
Hydraulic Grade at 1	5.00	<b>A</b>
Handraulic Grade at 2	<b>0:9</b> 0-	Ħ
Flow Area	0.55	- <del>R²</del>
Wetted Perimeter	2.62	R-
Vetocity	20.25	'ft/s
Velocity Head	6.37	我 -
Friction Slope	0.1041	67 fVft



#### Alt & Witzig Engineering, Inc.

J.F. New & Associates, Inc. B-1 PROJECT NAME Proposed Dam - Lake Tippecanoe Country Club Alt & Witzig File No. \$8362 Kosciusko County, Indiana LOCATION DRILLING and SAMPLING INFORMATION GROUNDWATER Date Storted 09/27/98 At Completion Dox A Hammer Wt. 140 lba. Dale Completed 09/27/98 After hours Hammer Drop 30\_ in. Baring Method HSA O Water on Rods Dry ft Spoon Sampler OD 2 in.

STRATA	SOIL CLASSIFICATION		€   <del>6</del>	٥	25	Sraphics Jates	on Test. N	nconfined sive	ocket æler	Moisture Centent %	o)
ELEV.	SURFACE ELEVATION	1	Strata Oeolh	Sample No.	Sample Type	Sampler Graphic Ground Water	Standard Penetralion Test N Blows/fcot	Qu - tsf Unconfined Compressive Strength	Pp - tsf Pocket Penetrometer	Moisture	Remarks
	Brown Clayey Silt with a trace of Organics (Topsoil)	1	0.	1	ss		50/3			9.3	
	Brown Sandy Clayey Silt with a trace of Gravel	5	1		ss		40		4.5+	7.7	
	Brown to Grey Mottled Sandy Silty Clay	+	9.	3	ss		25	3.7	4.0	10.7	
		†  <sub>1</sub>		4	ss	X	32	5.9	4.5+		
	Gray Sandy Silty Clay with Gravel	-   -   -   -	5	5	ss	X	16	4.1	4.0	10.2	
		2	0	6	ss	X	17	3.5	2.8	10.0	
	Boring Terminated 26.0 feet	2	5 26.	0 7	ss	X	20	4.3	3.3	9.5	

HSA - Hollow Stem Augers CFA - Continuous Flight Auger

control control (e.g. enga

DC - Driving Casing

MD - Mud Drilling

SS - Driven Split Spaon ST - Pressed Shelby Tube

CA - Continuous Flight Auger RC - Rock Core

CU - Cultings

CT - Continuous Tube

Page 1 of

### Alt & Witzig Engineering, Inc.

www.ii woo iyoo

CLIENT		& Associates, Inc.	Boring #	B-2	
	ME Propose	d Dam - Lake Tippecanoe Country Club	Alt & Witzig File No.	S8362	
LOCATION	Kosciusi	ko County, Indiana			
DRII	LING and SAMP	LING INFORMATION	— GROUNDWA	JER	
Date Stance	09/27/98	Hammer Wi, 140 lbs.	✓ At Completion	20 f	
Date Completed	09/27/98	Hammer Drop 30 in.	After hours	fi	
Boring Method	HSA	Spoon Sampler OD 2 in.	O Water on Bode	8.0 4	

STRATA ELEV	SOIL CLASSIFICATION	**	ų,	ō	ype	Graphics	Valer	Standard Penetration Test, N Blowstool	Qu - Isl Unconfined Compressive Strength	ocket eler	Maisture Content %	S
	SURFACE ELEVATION	Depth Scale	Strala Depth	Sample No.	Ѕатре Туре	Sampler Graphics	Ground Water	Standard Penetration Blows/foo	Qu - Isl U Compress Strength	Pp - tsf Pocket Penetrometer	Moisture	Remarks
	Brown Clayey Silt with a trace of Organics (Topsoil)	1	1.0	L			V					
	Brown Silty Clay with a trace of Organics		4,0	1	88	X		5			46.5	
	Gray Sandy Clay with a trace of Gravel	5	7.5	2	ss	X		4		0.5	17.5	
	Gray Sandy Silty Clay	-	8.5	3	SS	X.		6	1.6	2.0	11.3	
	Gray Till with Wet Sand Seams	10		4	55	X		7	1.6	1.3	124	
		15		5	SS	X		18		3.3	10.8	
	Boring terminated at 21.0 feet	20	21.0	6	ss	X		28				
-												

Bering Method

HSA - Hollow Stem Augers

CFA - Continuous Flight Auger

DO - Driving Casing

MD - Mud Dritting

Sample Type SS - Driven Split Speen

ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Care

CU - Cuttings CT - Continuous Tube

#### Alt & Witzig Engineering, Inc.

B-3 J.F. New & Associates, Inc. Boring # CLIENT PROJECT NAME Proposed Dam - Lake Tippecanoe Country Club Alt & Witzig File No. \$8362 Kosciusko County, Indiana LOCATION

DRILLING and SAMPLING INFORMATION

GROUNDWATER

09/27/98 Date Started Date Completed 09/27/98 Hammer Wt. 140 ibs. Hammer Drop 30\_\_ in.

At Completion P-1.5 ft hours

Boring Method HSA Spoon Sampler OD 2 in.

O Water on Rods Pry ft

STRATA ELEV	SOIL CLASSIFICATION SURFACE ELEVATION	Depth Scale	Strata Depth	Sample Ma	Sample Type	Sampler Graphics Ground Water	Standard Penetration Test. N Blows/fout	Qu - Isf Unconlined Compressive Strength	Pp - tsf Pocket Penetrometer	Moisture Content %	Remarks
~	SURFACE ELEVATION	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Strat	Samp	Sami	S S		S C S	Pp.	Mois	Ren
	Gray Silty Clay with Organics			1	ss	Щ	5		1.0	33.1	
		5	50	2	ss	X	11			10.8	
	Brown to Gray Sandy Silty Clay			3	ss	X	12			10.6	
	Gray Silly Sandy Clay with Gravel	- 10 -	10.0	4	ss	X	14		1.5	10.8	
		15	16,0	5	ss	X	18	3.5	3.0	11.2	
	Boring terminated at 16.0 feet										
		-  -  -									
		-									

HSA - Hollow Stem Augers CFA - Continuous Flight Auger

DC - Driving Casing

MD - Mud Drilling

SS - Driven Split Spaon ST - Pressed Shelby Tube

CA - Continuous Flight Augor RC - Rock Core

#### Alt & Witzig Engineering, Inc.

CLIENT

J.F. New & Associates, Inc.

PROJECT NAME Proposed Dam - Lake Tippecanoe Country Club

Boring #

B-4

LOCATION

Kosciusko County, Indiana

Alt & Witzig File No. S8362

DRILLING and SAMPLING INFORMATION

09/27/98 Date Started Date Completed 09/27/98 Hammer Wt. 140 lbs.

Hammer Drop 30 in.

Boring Method HSA

Spoon Sampler OD 2 in.

GROUNDWATER

✓ At Completion 2.0 It. hours

**▼** After

O Water on Rods 8.0 ft.

STRATA ELEV.	SOIL CLASSIFICATION		Fig.	ła	ype	Graphics	Veter	Standard Penetration Test, N Blows/toot	Qu - tsi Unconfined Compressive Shength	ocket	Maisture Content %	s.
ELEV.	SURFACE ELEVATION		Strata Depth	Sample Ma	Sample Type	Sampler	Ground Weter	Standard Penetrati Blows/for	Gu - tsf L Compres Shength	Peneiron	Maisture	Remarks
	Brown C.ayey Silt with a trace of Organics (Topsoil)  Brown Clayey Silt	1	3.0				V				20.4	
	Brown Clayey Siit	tl.		1	\$\$	Å		5			29.1	
	Brown Sandy Clayey Silt	5  -	7.0	2	ss	X		9		2.0	27.8	
			/.0	3	ss	X	0	10				
	Gray Crayey Silt with a trace of Sand and Gravel with Wet Sand Seams	H	0	4	ss	X		13			} }	
		Ħ										
		H.	16.1	5	ss	X		12		3.0	10.2	
	Boring terminated at 16.0 feet	H										
		H										
ļ		H										
	. ]	F						}				
		H		1_	<u></u>	Ц					<u> </u>	
Boring N HSA - Hollow S			4									ample Type ven Split Spoon

HSA - Hollow Stem Augers CFA - Continuous Flight Auger DC - Driving Casing MD - Mud Orilling

ST - Pressed Shelty Yute

CA - Cantinuous Flight Auger

RC - Rock Core

CU - Cullings

"CT - Continuous Tube

### Alt & Witzig Engineering, Inc. B-5

J.F. New & Associates, Inc.

PROJECT NAME Proposed Dam - Lake Tippecanoe Country Club LOCATION

Alt & Witzig File No. \$8362 Kosciusko County, Indiana

GROUNDWATER

DRILLING and SAMPLING INFORMATION

Date Started 09/27/98 Date Completed 09/27/98

Boring Method HSA

Hammer Wt. 140 lbs

Hammer Drop 30 in. Spoon Sampler OD 2 in. At Completion P-1.0 ft.

Boring #

hours

O Water on Rods Day n

STRATA ELEV.	SOIL CLASSIFICATION	ea!e	- Ep	2 Z	1/Fe	Sampter Graphics Ground Water	Standard Penetration Test, N - Blows/fcot	Ou - lsf Unconfined Compressive Strength	ocket neter	Moisture Content %	ফ	
	SURFACE ELEVATION	Depth Scale	Depth Scale Strata Depth Sample No		Sample Type		Standar Penetral Blows/fc	Ou - lest Compres Strength	Pp - Isf Pocket Penetrometer	Moislure	Remarks	
	Brown Clayey Sift with a trace of Organics (Topsoil)	1		1	SS	V V	13		2.5			
	Brown to Gray Silty Clay with a trace of Sand	5		2	\$\$		7		2.5			
	Brown Silty Clay with Sand and Gravel	-	€ 5	3	ss	4	13					
	Gray Sandy Silty Clay with Gravel	10	90	4	88	X	10	1.6	1.5			
		15	16.0	5	SS	X	11	1.9	1.5			
	Boring terminated at 16.0 feet		10.0									
		-										
		-										
[		-										
Boring N		.]_									ample Type	

HSA - Hollow Stem Augers CFA - Continuous Flight Auger DC - Driving Casing MD - Mud Drilling

SS Driven Split Spoon

ST - Pressed Shelby Tube CA - Continuous Flight Auger RC - Rock Core

CU - Cultings CT - Continuous Tube

#### Alt & Witzig Engineering, Inc.

J.F. New & Associates, Inc.

PROJECT NAME Proposed Dam - Lake Tippecanoe Country Club LOCATION Kosciusko County, Indiana

B-6 Borina # Alt & Witzig File No. S8362

DRILLING and SAMPLING INFORMATION

GROUNDWATER

Dois Started 09/27/98 Hammer Wt. 140\_ lbs

Al Completion 2.0 fr

Date Completed 09/27/98

Hammer Drop 30\_ in

Boring Method HSA

Spoon Sampler OD 2 in.

O Water on Rods Dry fi

STRATA ELEV.	SOIL CLASSIFICATION SURFACE ELEVATION	Depth Scale	Strata Depth	Sample No.	Sampe Type	Samper Graphics	Dana mare	Standard Penekation Test, N Blows/foot	Qu - tsf Unconfined Campressive Strength	Pp - tsf Pocket Penetvometer	Moisture Content %	Remarks
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CFA - Continuous Flight Auger

DC - Driving Casing

MD - Mud Drilling

ST - Pressed Shelby Tube

CA - Continuous Flight Auger RC - Rock Core

CU - Cuttings CT - Continuous Tube

LHV MO. . 3110102162

#### Alt & Witzig Engineering, Inc.

B-7 J.F. New & Associates, Inc. PROJECT NAME Proposed Dam - White Property Boring Alt & Witzig File No. S8362 Kosciusko County, Indiana LOCATION DRILLING and SAMPLING INFORMATION GROUNDWATER Al Completion 1.5 ft. Date Started 09/27/98 Hammer Wt. 140 lbs. **▼** After Date Completed 09/27/98 Hammer Drop 30 in. O Water on Rods 10.0 ft. Boring Method HSA Spoon Sampler OD 2 in.

SYRATA	SOIL CLASSIFICATION	- L 8	- Uda	ġ	ı/pe	Samcler Graphics Ground Water	on Test, N	Qu - 1st Urconfinad Compressive Strength	ccket neter	Moisture Content %	\$\$
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Enting Method

HSA - Hollow Stem Augers CFA - Continuous Flight Auger

DC - Driving Casing MD - Mud Drilling

SS - Driven Split Spoon ST - Pressed Shaiby Tube CA - Continuous Flight Auger

RC - Rock Core CU - Cultings

CT - Continuous Tube

V.

# PUBLIC MEETINGS

LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

#### V. Public Meeting Summary

Three public meetings were held in the North Webster Community Center. The meetings were announced by the Foundation in the local newspaper, by a mass mailing to Clear Choice and Lake Association members, and by publishing the announcements in the group's respective newsletters. The dates of the meetings were April 23, May 9 and June 15; a Thursday evening, Saturday morning and a Monday evening, respectively. A list of attendees is attached. The meetings attracted 11, 24 and 28 people respectively. Those present included landowners of both Clear Choice and Lake Tippecanoe property owner groups, the project participants, and representatives of the SWCD. IDNR representatives from Division of Soil Conservation and Division of Fish and Wildlife were invited to each meeting but declined to attend. These meetings provided useful feedback and excellent educational opportunities for all parties involved.

The agenda at each meeting was essentially the same. It included a showing of a 10 minute video which summarized the diagnostic study, a review of why the Foundation was formed and how it operates, additional discussion format on the data collected and site selection, and presentation of conceptual designs followed by questions and answers.

Questions and discussions from the audience included:

- 1. How large are the respective basins?
- 2. How does holding water kill bacteria?
- What is the relationship of volume of water and nutrient concentrations to the size of the watershed?
- 4. Do existing wetlands on Kuhn Ditch have greater functional capacity than the constructed wetlands proposed?
- 5. How do aquatic plants help and which ones work best? Will plants control erosion of the lakeshore?
- 6. What are the impacts of boating on water quality? How can we establish and enforce no-wake zones?
- 7. What about the land application of septic or sewage sludge from the treatment plant?
- 8. What about overflows from the treatment plant?

- 9. Before finalizing design on the Clay property what about containing or eliminating the manure laden runoff from the nearby farm?
- 10 What about the recycling of stormwater into the irrigation system on the golf course project?
- 11. How will zebra mussels impact the water quality of the lake and will they do more for the lake than the proposed projects?
- 12. How do we involve and educate lake users that are not property owners around the lake?
- 13. What happens to the maintenance of these proposed projects and the leases if the Foundation is dissolved?
- 14. What happens to the Foundation money raised if the IDNR does not fund these proposed projects?
- 15. If only limited funds for the IDNR are available, who chooses the project that gets constructed?
- 16. What are the best ways to treat *Eurasian milfoil* in the lake?
- 17. When are we going to dredge the areas recommended in the diagnostic study?
- 18. Will there be any monitoring to address the success of these projects?
- 19. Are these projects more valuable than getting a sewer project implemented?
- 20. Why don't we spend money on a septic study?
- 21. What is the maintenance schedule and costs on these projects?

#### 22. Negative Comments from one Lake Tippecanoe Property Owner

The Diagnostic Study suggested that one of the proposed stormwater detention basins for Indian Creek be placed on a site that is wooded with natural ravines. A property owner was contacted in February 1998 to set up a meeting to discuss Lake Tippecanoe's proposed projects. This property owner owns considerable farm land located in the Indian Creek and Hanna B. Walker watersheds. The property owner was very distrustful of any organization on the lake promoting water quality issues and any consulting firm in general. The property owner did not favor any of the proposed projects. The property owner was assured that another site would be found for the proposed project and that no project would be pursued in regard to their property. In May

1998 a site inspection of the country club site was conducted with the owner and they still reiterated their position had not changed; however, they would not oppose these proposed projects.

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# VI. PUBLIC INFORMATION HANDOUT

LAKE TIPPECANOE FEASIBILITY STUDY KOSCIUSKO COUNTY, INDIANA

#### VI. Public Information Handout

The attached brochure was originally drafted by the Foundation and reviewed by the consultant and the IDNR Division of Soil Conservation. The pamphlet was handed out at public meetings and mailed to approximately 1,200 homeowners around Lake Tippecanoe, Lake James, and Oswego Lake. In addition to a pamphlet, the Tippecanoe Environmental Lake and Watershed Foundation sponsored an educational video tape production and a handout to assist with raising funds for the proposed projects. Attached are newspaper articles printed by the local press.

# Wetlands are just one part of the solution . . .



There are several things affecting the water quality of Lake Tippecanoe.

While wetlands near the lake can improve its water quality, they are

just one part of the overall solution to the problem.

The "T by 2000" Lake & River Enhancement program administered by the Indiana Department of Natural Resources (IDNR) is designed to reduce the impacts of eroded soil and nutrients on lakes and streams.

IDNR's Lake & River Enhancement staff can answer questions about improving lakes and provide helpful information. IDNR works closely in a partnership with the Kosciusko County Soil and Water Conservation District to assist the Tippecanoe Environmental Lake and Watershed Foundation (TELWF) and lake users like you. This teamwork greatly improves our chances of success.

TELWF is asking state and federal agencies for financial aid for lake improvement projects, but they cannot provide all of the necessary funding. Won't you please help?

Lake property values are tied to water quality. Help us to insure the value of Tippecanoe Lake for our children and grandchildren.

### HELP IMPROVE YOUR LAKE

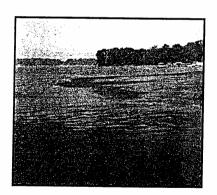
To find our how, contact TELWF today at (219) 843-2185

The mission of the Tippecanoe Environmental Lake and Watershed Foundation is to promote the understanding and management of our lakes and watershed fostering their restoration and preservation for today and for future generations.

# HAVE YOU NOTICED MORE WEEDS IN TIPPECANOE LAKE?

DOES ALGAE SEEM TO BE DISCOLORING THE WATER MORE?

# IS THE FISHING NOT AS GOOD AS IT USED TO BE?



CONSTRUCTED WETLANDS, STORMWATER DETENTION BASINS, AND SEDIMENT TRAPS CAN HELP IMPROVE WATER QUALITY

# Why Wetlands Are Necessary for a Healthy Lake . . .



### STORMWATER CONTROL

Wetlands can reduce the intensity of flow in streams and ditches that enter lakes by capturing stormwater and releasing it gradually.

### CONTAMINANT FILTERING

Runoff water containing toxins from heavy metals and chemicals can be filtered by wetlands before entering lakes.

### WEED PREVENTION

Phosphorus and nitrogen in the stormwater runoff fertilize weeds and algae that can choke lakes. Wetlands can remove a majority of these nutrients from the water before it enters the lakes.

### SEDIMENT TRAPPING

When it rains, soil is washed off the land; wetlands can trap much of the eroded soil before it reaches lakes.

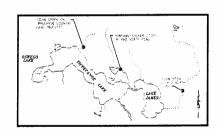


### **CREATING NEW WETLANDS**

Many wetlands that have been drained and filled in are lost forever. However, some can be restored or replaced by constructed wetlands that can improve the water quality of Tippecanoe Lake.

Cost-share funding for project site evaluation, design, and construction of wetlands areas is available from state and federal agencies.





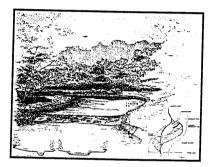
Constructed wetlands, stormwater detention basins and sediment traps can help improve the water quality of Tippecanoe Lake. A team effort by the Tippecanoe Environmental Lake and Watershed Foundation, the Kosciusko County Soil and Water Conservation District, and the Indiana Department of Natural Resources is underway which will implement lake protection measures.

We have received a grant from IDNR to install wetlands/sediment traps/ stormwater basins on three major drainage ditches that flow into Tippecanoe Lake.

### HOW CAN WETLANDS HELP?

Wetlands are areas with shallow water, aquatic plants and soil that absorb and retain moisture.

Wetlands play a significant role and can greatly influence the water quality of your lake.



As you can see in the above picture, water from the ditch is now forced to flow through the "maze" of the rectangular wetland. By the time the water reaches the end of it, many of the nutrients, bacteria and sediment have been removed. The cleaner water then enters the lake.

We want to do the same thing at Lake Tippecanoe.

### Won't you join our team?

## Preserving the Wetlands Protects the Lake's Water Quality



It is much easier and less expensive to preserve an existing wetland than it is to restore or construct one.

Too often, wetlands around lakes are drained and/or filled in because people aren't aware of the essential benefits that wetlands provide.

Remember: Each time a wetland near our lake is destroyed, the risk of impairing our lake's water quality is increased. That translates into a reduction in the value of lake property. People don't want to buy land on a muddy, clogged, weed-infested lake.

### THE BIGGER PICTURE

When the first settlers came to Indiana, there were more than 5 million acres of wetlands. Today, fewer than 20% remain. The loss of these wetlands affects not only the quality of our streams and lakes, but flood control and fish and wildlife values as well. It is critical that we do all we can to protect our remaining wetlands

# Times-Union



No. 11

Warsaw. IN 46580

219-267-3111

www.timeswrsw.com

50 Cents

### Sentiments Aside, Tippy Residents Working Together To Cut Sediment

BY DAN SPALDING
Times-Union Staff Writer T

Two groups on opposite sides of the Tippecanoe Lake sewer proposal three years ago are working together today for a cleaner lake tomorrow.

Tippecanoe Environmental Lake and Watershed Foundation has been meeting for nearly a year, and Saurday will present plans to the public for free projects aimed at improving the lake's water quality.

The meeting starts at 9 a.m. at the North Webster Community Building. The public is invited.

What the public is likely to see is a cohesive group that has left behind any animosity between Lake Tippecanoe Property Owners Association and a group known as Clear Choice, which opposed sewer

Efforts to construct sewers began in 1995 but died about one year later after opposition from Clear Choice arose.

The foundation includes members and leaders from both organizations, said Holly LaSalle, one of the foundation's directors.

She said she's not surprised the groups have put aside their differences.

"We have the strong desire to see our lakes go on and not have this accelerated dying." LaSalle said

Sewers are not part of the discussion.

"The only thing we are going to address is watershed improvement," she said.

See TIPPY- Page 2A

2A Friday, May 8, 1998

### Tippy—

Continued From Page 1A

The foundation was formed last July and is participating in the state's T-By-2000, an attempt to improve the water quality in lakes. A study has already been completed and design work has begun for three projects at inlets on the lake's north side.

The inlets include Indian Creek, Hannah B. Walker Ditch and Kuhn Ditch. Projects would entail a storm water detention basin at Indiana Creek and wetlands and sediment traps at the other two inlets.

"It won't be a total solution to our problems, but it's a big start," LaSalle said.

J.F. New and Associates, Walkerton, are contracted as the environmental consultants, and a spokesman for the firm will review plans at Saturday's meeting.

The lake is participating in Indiana University's volunteer water monitoring program. Based on the monitoring, the lake has a poor rating because of high levels of nutrient and sedimentation and overuse of the lake, LaSalle said.

The foundation hopes to reduce the influx of nutrient load into the lake by 20 percent. If that goal is achieved, it would help maintain the current quality level, she said.

The foundation produced a video used for educational purposes.

T-By-2000 is a cost share program. The first two phases included 90 percent state funding. The lake association paid the local portion of the first phase and the foundation is covering the local portion of the second phase, LaSalle said.

A major fund-raising effort will gear up soon to raise an estimated \$200,000 needed for local share of the construction costs, LaSalle said.

The foundation president is Bob Smith. LaSalle is former president of the lake associa-

### Tippecanoe

Environmental

Lake

ά

Watershed

Foundation

### Organization

The Tippecanoe Environmental Lake and Watershed Foundation (TELWF) was born from the Lake Tippecanoe Property Owners, Inc. The primary difference being that the Foundation focuses only on water quality and lake preservation. The TELWF is a separate and distinct organization unrelated to LTPO. The organization is further supported by Clear Choice Tippecanoe Lake Association, another group focusing on lake water quality. TELWF is a not-for-profit Indiana Corporation qualified under the IRS 501c3 code<sup>1</sup>; your contributions will be tax deductible. The foundation is organized with the ability to both apply for, and issue grants to further its mission. It is managed by a nine member Board of Directors, with three members terms expiring each year. The current Board Members, Officers and term expirations follows:

<u>NAME</u>	OFFICER	TERM EXPIRATION
Bob Smith	President	2000
Gary Calhoun	Vice President	1998
Jeff Thornburgh	Secretary-Treasure	er 2000
John Franz	•	1998
Emily Greenland		1998
Betty Jo Koss		1999
Holly LaSalle		1999
Darron Longenecker		1999
Don Sloan		2000

<sup>&</sup>lt;sup>1</sup> TELWF applied for IRS 501c3 recognition on 12/20/97, with acknowledgment of receipt on 2/2/98. No problems are expected, with approval anticipated by 6/15/98.

### Mission

Our mission shall be to promote the understanding and management of our lakes and watershed, fostering their restoration and preservation for today and for future generations.



Page 2 4/11/1998

### Addresses

All funds, relating to TELWF, will be handled by Lake City Bank in Warsaw, Indiana.

All contributions should be directed to:

Tippecanoe Environmental Lake & Watershed Foundation c/o Lake City Bank P.O. Box 1387 Warsaw, IN 46580 Attn.: Mr. Max Mock (219) 267-9110

#### Foundation address:

Tippecanoe Environmental Lake and Watershed Foundation
P.O. Box 55
North Webster, IN 46555
E-Mail: hal@kconline.com
Website: www.angelfire.com/in/telwf

Page 3

#### Strategic Objectives

### I. Stop Sedimentation and Nutrient Loading by Constructing:

- Wetlands
- · Storm Water Detention Basins
- · Sediment Traps

### II. Educate Watershed Lake Users

- · Lake Residents, Businesses, Farmers and Boaters
- Using Videos, Brochures, Town Meetings, Direct Mail, Neighbor to Neighbor

### III. Homeowner's Responsibilities

- Lawn Maintenance
- · Septic Care
- · Boating Activities
- Construction
- · Wetland Preservation

### IV. Reverse Cultural Eutrophication (Man's Effect On The Aging Process)

- · Tri-County Projects
- Dredging
- Future Wetland Construction
- Reduce Nitrogen and Phosphorus

Page 4 4/13/98

### **Information Summary**

- Diagnostic study by J.F. New & Associates, Inc. and Indiana University.
   Funded by the Lake and River Enhancement Program of the Indiana DNR and Lake Tippecanoe Property Owners Association.
- Study lake and stream water quality samples, aquatic macrophytes, land use patterns, review of historical studies.
  - **Lake Tippecanoe** is classified as a <u>mesotrophic</u> lake, oxygen only adequate in upper sixteen feet of water; very high inputs of nitrogen and phosphorus. A very significant decline since 1992.
- Eurasian milfoil is the only common aquatic vegetation found to be detrimental to the lake. Controllable
  with spot treatments.
- It is Critical to Reduce nutrient loading by 20% in order to maintain mesotrophic condition. To further
  improve lake conditions, other long term goals must be met.
- Tippecanoe River and Grassy Creek should be controlled by conservation practices of DNR in upper watershed. Conservation tillage, reduced nitrogen and phosphorus application, managed animal waste.
- Suspended sediments and nutrients can be reduced by storm water detention structures, wetland filters, and/or sediment traps.
- No-wake boating regulations in shallow areas will reduce the re-suspension of nutrient laden sediments on the lake bottom.
- Dredging at Hannabe-Walker Ditch and Indian Creek will reduce the amount of nutrient laden sediment
  exposed to power boat activity.

Page 5 4/13/98

### FIRST

### STEPS

Page 6 4/13/98

### Lake & River Enhancement T-By-2000 Cost Estimates

Phase I:	Diagnostic Study - Completed J.F. New & Associates, Inc. 90% DNR 10% LTPO - \$3,700	<b>TOTAL</b> \$ 37,000	<u>DNR</u> \$ 33,300	TELWF
Phase II:	Engineering Feasibility Study - Current J.F. New & Associates, Inc. 90% DNR 10% TELWF Land lease expense - negotiable	\$ 48,600	\$ 43,740	\$4,860
Phase III:	Posign & Construction Estimates - Future Final Design, Permits and Management A. Kuhn Ditch Watershed B. Hannabe-Walker Watershed C. Indian Creek Watershed 70% DNR 30% TELWF	\$ 39,000 \$ 91,000 \$ 91,000 \$ 79,000	\$ 27,300 \$ 63,700 \$ 63,700 \$ 55,300	\$11,700 \$27,300 \$27,300 \$23,700
Subtotal		\$385,600	\$287,040	\$94,860
Phase IV:	Endowment Trust For Måintenance Estimated Expense Lease Land, Trap Cleaning H <sup>2</sup> O Testing, Aquatic Plant Care Consulting	\$105,140		\$105,140
TOTAL	5	\$490,740	\$287,040	\$200,000

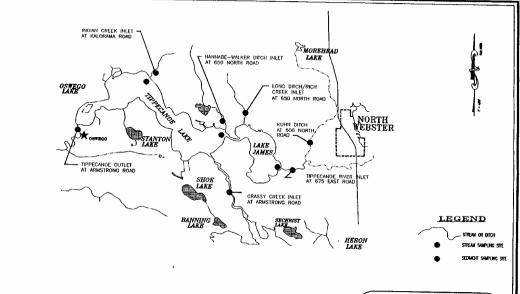


FIGURE 13. LAKE TIPPECANOE FEASIBILITY STUDY STREAM AND SEDIMENT SAMPLE LOCATIONS



Permitting • Delineations • Mitigation Design • Wetland Nursery • Natural Systems for Wastewater Treatment Engineering

### Hannabe-Walker Watershed Treatment System

(Located on north side of the lake, just west of the channel connecting Lake Tippecanoe and James Lake)

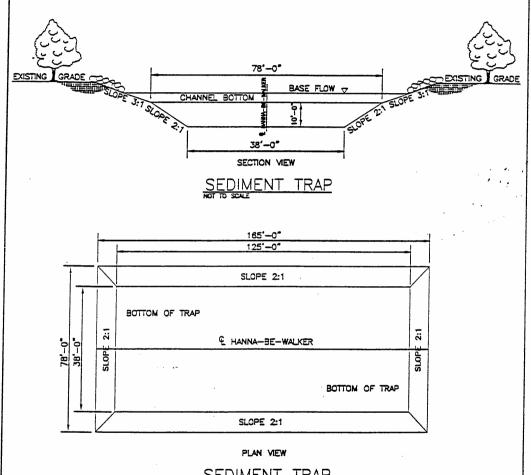
Hannabe-Walker Ditch has a high suspended sediment and phosphorus load. Sediment traps were designed with an optional treatment wetland to handle the one year 24 hour storm event and remove 75% of suspended sediment, 45% of total phosphorus and 25% of total nitrogen. Once a sediment trap and filter is constructed, the TELWF should dredge the outlet of the ditch to remove the nutrient laden sediments from the shallow water at the mouth. Removing these sediments would reduce the exposure of the water column to the phosphorus and nitrogen absorbed onto the sediment.

### **Kuhn Ditch Watershed Treatment System**

(Located between the Town of North Webster and James Lake)

Kuhn Ditch has a high suspended sediment load as well as elevated levels of fecal coliform bacteria, nitrogen and phosphorus. Kuhn Ditch can be treated using a typical stormwater filter within the confines of the existing drainage easement. The vegetated storm water filter is designed to remove 75% of total suspended solids, 45% of total phosphorus, and 25% of total nitrogen during a one year 24 hour storm event.

Kuhn Ditch & Hannabe-Walker Watershed Project Sediment Trap

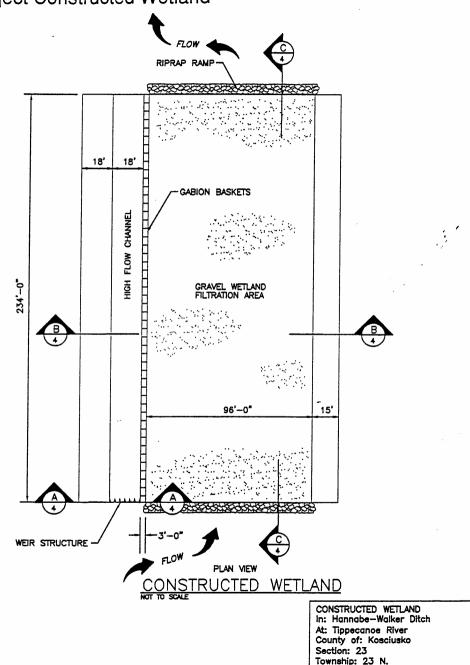


SEDIMENT TRAP

SEDIMENT TRAP
In: Hannabe-Walker Ditch
At: Tippecanoe River
County of: Kosciusko
Section: 23
Township: 23 N.

Range: 5 W. Sheet 2 of 4

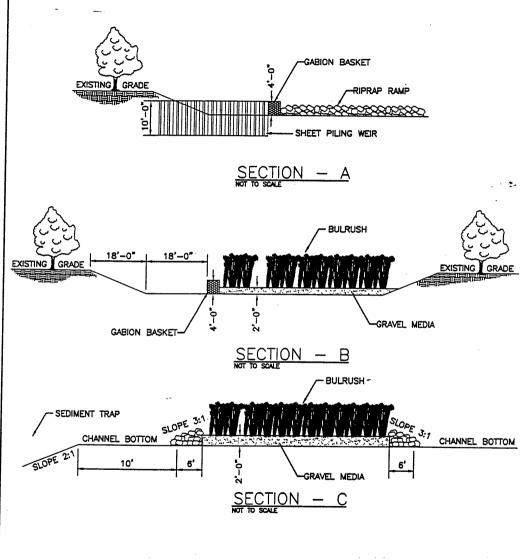
Kuhn Ditch & Hannabe-Walker Watershed Project Constructed Wetland



Range: 6 W.

Sheet 3 of 4

Kuhn Ditch & Hannabe-Walker Watershed Project Constructed Wetland Details



CONSTRUCTED WETLAND DETAILS
In: Hannabe-Walker Ditch
At: Tippecanoe River
County of: Kosciusko
Section: 23
Township: 23 N.
Range: 6 W. Sheet 4 of 4

### **Indian Creek Watershed Detention System**

(Located on the north shore east of the Country Club)

Indian Creek has elevated levels of fecal coliform bacteria and abnormally high storm water volume and velocity causing erosion of embankments and subsequent above average sediment loads. Control of storm water from drainage off the Tippecanoe Country Club and agricultural fields to the north would resolve both problems. A series of detention structures has been conceptually designed to retain water for 48 hours during a five year event. This retention time causes the coliform bacteria and associated pathogens to perish and allows a more controlled flow of water into the natural channel.

### Indian Creek Watershed Detention System

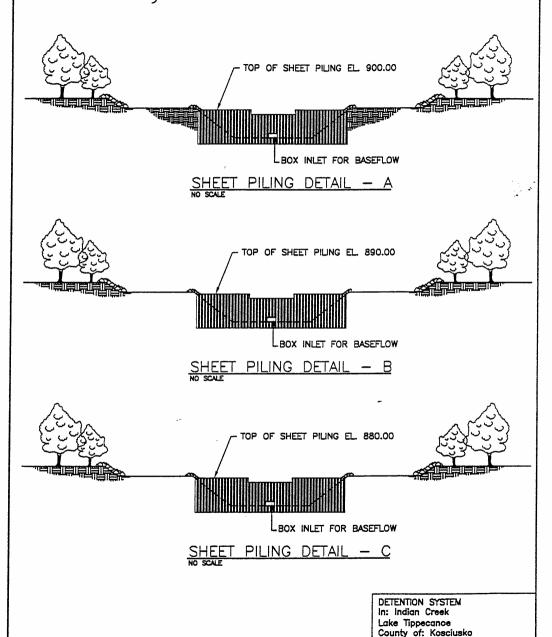


FIGURE 37

Section: 6 Township: 33 N. Range: 7 W.

•	THE QUESTIONS IS, DO $YOU$ WANT TO LIVE ON A CLEAN, CLEAR LAKE?
•	HELP US CLEAN-UP THE LAKE FOR YOUR CHILDREN AND YOUR CHILDREN'S CHILDREN.
	CIVE WHAT YOU CAN EXCHED YOUR TIME OF MONEY POTTLADE VALVANAR

#### Standing Committees

### 1. Fund Raising Committee

\*Jeff Thornburgh Jack Doll
Holly LaSalle Bob Schwartz
Betty Jo Koss Mark Ennes
Darron Longenecker Janet Petro
Gary Calhoun Bob Smith
Phil Baskett Tillie LaSalle
Don Sloan John Franz
Emily Greenland

### 2. Education Committee

\*Emily Greenland Janet Petro
Holly LaSalle John Franz
Gary Calhoun Jeff Thornburgh

### 3. Planning Committee

\*Darron Longenecker Jeff Thornburgh Holly LaSalle Betty Jo Koss

John Franz

\*Chairperson

### 4. State Lobbying Committee

\*Holly LaSalle Glenna Shelby

### 5. Nominating Committee

\*Betty Jo Koss Janet Petro Gary Calhoun Jack Doll Don Sloan

### 6. Public Relations Committee

\*Bob Schwartz Mark Ennes Jeff Thornburgh Holly LaSalle

### 7. Watershed Committee

\*Holly LaSalle Bob Smith Emily Greenland Mark Ennes

### 8. Finance Committee

\*Betty Jo Koss Jeff Thornburgh Darron Longenecker Bob Smith Gary Calhoun

### VII.

### UNUSUAL PHYSICAL

OR

### SOCIAL COSTS

LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

### VII. Unusual Physical or Social Costs

The Indian Creek project involves access through a golf course for approximately 500 yards. This adds to the cost for clean up since grades have to be returned to golf course standards and reseeded. Removal of trees is difficult because they have to be hauled off-site and disposed of or burned. Excavation and hauling costs are increased because construction will only be allowed between January 1, 1999 and April 1, 1999. These physical constraints will double the per unit cost of earthmoving and tree removal. There are no social costs for this project that have been identified to date.

The Hanna B. Walker Ditch project on the Richard Clay property does not have any unusual physical costs associated with the excavation and disposal of material on-site. As a condition of constructing this project, the landowner has requested that the Foundation first deal with the suspected application of manure on a farm field which drains directly into the stream adjacent to the proposed project. There are no additional phystical or social costs to this project.

The Hanna B. Walker project on the Camp Crosley property does not have any unusual physical or social costs.

The Kuhn Ditch project on the Richard White property does not have any unusual physical costs involved. Proposed changes to the project to appeal to the landholder may result in several additional meetings with the regulatory agencies such as the U.S. Fish and Wildlife Service and the Kosciusko Drainage Board. However, neither of these agencies has indicated any opposition to the project at this time.

### VIII.

### **CONCEPTUAL**

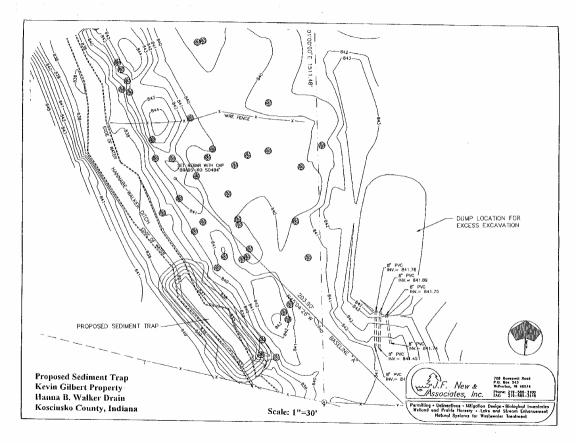
### **PLANS**

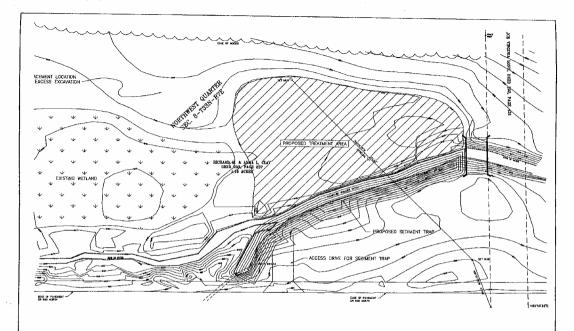
LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

### VIII. Conceptual Plans Summary

Attached are the conceptual designs for two Indian Creek detention structures; two sediment trap locations on Hanna B. Walker Ditch; and a combination sediment trap nutrient filter at the Clay property on Hanna B. Walker Ditch and the White property on Kuhn Ditch. The Gilbert property sediment trap on Hanna B. Walker Ditch is potentially being relocated to the YMCA Camp Crosley property for which permit applications were applied for (see Permit Coordination Section). The sediment trap and wetland filter on the Clay property, Hanna B. Walker Ditch, is feasible as designed and can proceed to final design. The sediment trap and wetland filter on the White property, Kuhn Ditch, is being relocated 200 yards north of the existing structure. Surveys and funding were not available to complete the new drawings for this study. All other sections in this document, including cost estimates, refer to the new location of the Kuhn Ditch wetland filter and sediment trap.





Scale: 1"=50'

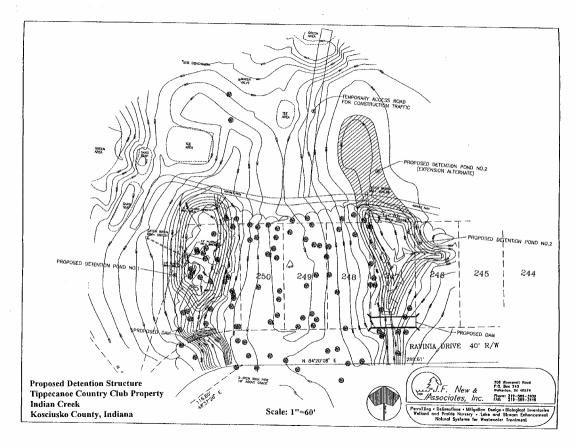
Proposed Sediment Trap and Wetland Filter Richard Clay Property Hanna B. Walker Drain Kosciusko County, Indiana

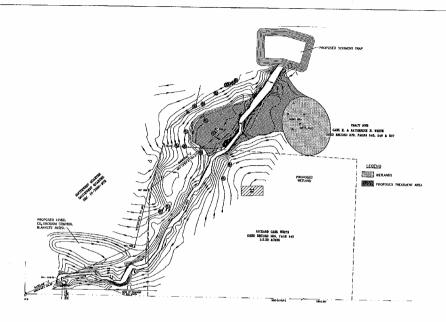




705 Roomevelt Road P.O. Bex 243 Wolkerton, NI 45574 Phones 219-568-3100 FAX: 219-568-3148

Permitting - Defineations - Mitigation Design - Biological Inventories
Welland and Prairie Mursery - Lake and Stream Enhancement
Natural Systems for Wastewater Trentment





Scale: 1"=100"

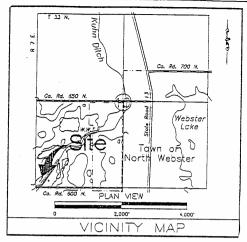
Proposed Sediment Trap and Nutrient Filter Please see the Following Kichard White Property
Kuhn Ditch
Kosciusko County, Indiana

Change on this project



Permitting - Delineations - Miligation Design - Biological Inventories
Welland and Prairie Hursery - Lake and Stream Enhancement
Natural Systems for Wastewater Treatment

Kuhn Ditch Watershed Treatment System



Co. Rd. 350 N. Eva G.K. Priest Kuhn Ditch Town of North Webster Wetland Area New Location limént Trạp C.K. White Old Location Co. Rd. 500 N. Constructed Wetland

GURE 28A
JHN DITCH
CATION MAP

PLAN VIEW

J.F. New & Associates, Inc.

708 Roosevelt Rood P.O. Box 243 Yulkerton, N 46574 Phone: 219-586-3400 FAX: 219-585-3448

Permitting • Delineations • Mitigation Design • Biological Inventories

Wetland and Prairie Nursery • Lake and Stream Enhancement
Natural Systems for Wastewater Treatment

### **Indian Creek Detention Basin**

Zone

Common Name

Scientific Name

Bottom side slopes and disturbed

areas

Redtop or (Bentgrass)

Agrostis alba (palustris) Avena sativa

Oats

Hanna B. Walker Ditch Gilbert Property Sediment Trap

Zone

Common Name

Scientific Name

Disturbed areas and embankment above water line

Common woodreed Virginia wild rye Gray's sedge Tall bell flower Wild golden glow

Cinna arundinacea Elymus virginicus Carex grayi Campanula americana Rudbeckia laciniata

### Hanna B. Walker Ditch Richard Clay Property Planting Plan

Zone	Common Name	Scientific Name
Detention basin border	River Bulrush	Scirpus fluviatillis
1 - 2 feet water depth	Yellow pond lily	Nuphar advena
0 - 1 foot water depth	Sweet Flag Arrowhead Pickerelweed Common burreed Arrow arrum	Acorus calamus Sagataria latifolia Pontederia cordata Sparganium eurycarpum Peltandra virginica
Remainder of wetland	Blue flag iris Common rush Monkey flower Tearthumb Seedbox Swamp milkweed Ditch stone crop Water plantain Spike rush Fox sedge Common fox sedge Bottlebrush sedge Crested oval sedge Bristly sedge Wool grass Dark green rush Rice cut grass Blue joint grass Red top Boneset Joe-pye weed Swamp buttercup	Iris vesicolor Juncus efusus Mimulus ringens Polygonum persicaria Ludwigia alternifolia Ascelpias incarnata Penthorium sedoides Alisima subcordatum Eleocharis sp. Carex vulpinoidea Carex stipata Carex lurida Carex cristatella Carex comosa Scirpus cyperinus Scirpus atrovirens Leersia oryzoides Calamagrostis canadensis Agrostis alba Eupatorium perfoliatum Eupatorium maculatum Ranthulus septentrionalis

## Kuhn Ditch Richard White Wetland Filter Planting Plan

Zone	Common Name	Scientific Name
Berm & swale	Red top Switchgrass Oats	Agrostis alba Panicum virgatum Avena sativa
In and around sediment trap water line		
Dry embankment and upland disturbed areas	Virginia wild-rye Oats Common wood sedge Spreading oval sedge or Short's sedge	Elymus virginicus Avena sativa Carex blanda Carex cephalophora Carex shortiana
Created wetland floodplain		
Detention basin border	River Bulrush	Scirpus fluviatillis
1 - 2 feet water depth	Yellow pond lily	Nuphar advena
0 - 1 foot water depth	Sweet Flag Arrowhead Pickerelweed Common burreed Arrow arrum	Acorus calamus Sagataria latifolia Pontederia cordata Sparganium eurycarpum Peltandra virginica
Remainder of wetland	Blue flag iris Common rush Monkey flower Tearthumb Seedbox Swamp milkweed Ditch stone crop Water plantain Spike rush Fox sedge	Iris vesicolor Juncus efusus Mimulus ringens Polygonum persicaria Ludwigia alternifolia Ascelpias incarnata Penthorium sedoides Alisima subcordatum Eleocharis sp. Carex vulpinoidea Carex stipata

Common fox sedge
Bottlebrush sedge
Crested oval sedge
Bristly sedge
Wool grass
Dark green rush
Rice cut grass
Blue joint grass
Red top
Boneset
Joe-pye weed
Swamp buttercup

Carex lurida
Carex cristatella
Carex comosa
Scirpus cyperinus
Scirpus atrovirens
Leersia oryzoides
Calamagrostis canadensis
Agrostis alba
Eupatorium perfoliatum
Eupatorium maculatum
Ranthulus septentrionalis

## EASEMENT/

## PROPERTY OWNER

## AGREEMENTS

LAKE TIPPECANOE FEASIBILITY STUDY KOSCIUSKO COUNTY, INDIANA

## IX. Easements/Property Owner Agreements

The landowners from all four initial project sites signed letters indicating their support of the projects and willingness to continue working with the Foundation to implement the proposed projects.

A land use agreement is attached for the detention structures on Indian Creek. The agreement states the project must be constructed between January 4 and March 31, 1999. A formal agreement for the Hanna B. Walker Ditch sediment trap will be drafted in November 1998.

The sediment trap originally proposed on the Gilbert property, Hanna B. Walker Ditch, has been relocated since the draft report of this study. The YMCA Camp Crosley will be accepting the property immediately downstream of the Gilbert property from The Nature Conservancy in February 1999. The YMCA Camp Crosley director approached TELWF board members about locating the sediment trap on their property for educational purposes and ease of access. No formal agreement has yet been drafted, however, based on their verbal commitment and willingness to donate the site and access for free, J.F. New revised permit applications and the design to match the new site. Formal agreements on the two sediment traps and wetland filters have been delayed until the next project scope as per an agreement with the Foundation, dated August 25, 1998. Additional site survey and design work for those wetland filters will be performed under the design/build contract for the Indian Creek and Hanna B. Walker projects.

19 June, 1998

543 East 650 North Syracuse, Indiana 46560

John Richardson J. F. New and Associates, Inc 708 Roosevelt Road Walkerton, Indiana 46574

RE: Lake Tippecanoe Enhancement Projects

Dear John:

The Tippecanoe Environmental Lake and Watershed Foundation (the Foundation) has approached me regarding the potential lease or use of a portion of my property south of 650 North road near North Webster, Indiana for the construction of a sediment trap on Hanna B. Walker Ditch. Conceptual designs have been presented to me which I have reviewed and discussed with you. My official position at this date, is that I am willing to assist the Foundation in the development of a structure on my property that is of mutual benefit to the lake and my property. I understand that this informal agreement will allow you to proceed with a request for additional funding to complete final design and permitting. This agreement is signed with the condition that the Foundation or its appointed consultant continue to work with me on the final design and an appropriate lease agreement.

Sincerely,

Kevin Gilbert



Date: June 25, 1998

To: John Richardson

J.F. New and Associates 708 Roosevelt Road Walkerton, IN 46574

From: Dave Montgomery

Re: Lake Tippecanoe Enhancement Projects

Dear John:

I write on behalf of the Board of Directors of Tippecanoe Lake Country Club. The Tippecanoe Environmental Lakes and Watershed Foundation (the Foundation) has approached the Tippecanoe Lake Country Club regarding the potential lease of a portion of its property off of namber one green and number two tee for construction of dry bortom stormwater detention basins. Conceptual designs have been presented to the T.L.C.C. Board which we have reviewed and discussed with you. Tippecanoe Lake Country Club's official position at this date is that it is willing to assist the Foundation in the development of a structure on its property that is of mutual benefit to the lake and our property. I understand that this informal statement of Tippecanoe Lake Country Club's present intent will allow you to proceed with a request for additional funding to complete final design and permitting. This letter is signed with the express understanding that the Foundation or its appointed consultant will continue to work with Tippecanoe Lake Country Club on the final design and an appropriate lease agreement.

Sincerely.

David L. Montgomery

President, Board of Directors Tippecanoe Lake Country Club

Cc: Richard Kemper, Kosciusko County Surveyor (w/o enclosure)
Holly LaSaile, Chairman TLWF x 2000 committee



RICHARD C. WHITE President Chief Executive Officer

June 22, 1998

John Richardson
J.F. New and Associates, Inc.
708 Roosevelt Road
Walkerton, Indiana 46574

Re: Lake Tippecanoe Enhancement Projects

Dear John:

The Tippecanoe Environmental Lake and Watershed Foundation (the Foundation) has approached me regarding the potential lease or use of a portion of my property off 650 North Road near North Webster, Indiana, for the construction of a sediment trap and wetland filter. Conceptual designs have been presented to me which I have reviewed and discussed with you.

My official position at this date is that I am willing to assist the Foundation in the development of a structure on my property that is of mutual benefit to the lake and my property. I understand that this informal agreement will allow you to proceed with a request for additional funding to complete final design and permitting. This agreement is signed with the condition that the Foundation, or its appointed consultant, continue to work with me on the final design and an appropriate lease agreement.

Sincerely,

Richard C. White

Vide C. Wes

17 June, 1998

104 North Chevene Drive Warsaw, Indiana 46580

John Richardson J. F. New and Associates, Inc. 708 Roosevelt Road Walkerton, Indiana 46574

RE: Lake Tippecanoe Enhancement Project

## Dear John:

The Tippecanoe Environmental Lake and Watershed Foundation (the Foundation) has approached me regarding the potential lease or use of a portion of my property off 650 North road near North Webster, Indiana for the construction of a sediment trap and wetland filter. Conceptual designs have been presented to me which I have reviewed and discussed with you. My official position at this date, is that I am willing to assist the Foundation in the development of a structure on my property that is of mutual benefit to the lake and my property. I understand that this informal agreement will allow you to proceed with a request for additional funding to complete final design and permitting. This agreement is signed with the condition that the Foundation or its appointed consultant continue to work with me on the final design and an appropriate lease agreement.

Ruharf Al Pay

## Agreement For Construction and Maintenance of Storm Water Detention Basins, Dry

This agreement, made and entered into on this <u>38</u> day of September, 1998, by and between Tippecanoe Lake Country Club, (hereinafter referred to as LESSOR), and the Tippecanoe Environmental Lake and Watershed Foundation, a not-for-profit corporation organized under the laws of the State of Indiana, (hereinafter referred to as LESSEE),

## WITNESSETH:

Lesser, in consideration of the rents and covenants herein contained, does hereby lease to Lessee approximately .726 acres of land located in Tippecanoe Township, Kosciusko County. Indiana, in the Southwest Fractional Quarter of Section 6-T33N-R7E and more particularly described in the legal descriptions attached as Exhibit "A" (hereinafter often referred to as the "Property") and does hereby grant to Lessee access to said acreage for the construction of certain storm water detention basins, dry.

WHEREAS, the Tippecanoe Environmental Lake and Watershed Foundation is a not-forprofit Indiana corporation which is dedicated to improving the water quality of Tippecanoe Lake, located in Kosciusko County, Indiana and

WHEREAS, the Tippecanoe Environmental Lake and Watershed Foundation, wishes to undertake activities and construction on the Property as part of its Lake Enhancement project to improve the water quality of Tippecanoe Lake, located in Kosciusko County, Indiana, and

WEIEREAS, Lessor is in agreement with the Tippecanoe Environmental Lake and Watershed Foundation's desire to improve the water quality of Tippecanoe Lake.

NOW, THEREFORE, Lessor, for themselves, their assigns, and administrators, in consideration of the covenants, undertakings and agreements hereinafter set forth, and in consideration of the sum of Ten Dollars (\$10.00) and other valuable consideration, the receipt of which is hereby acknowledged, hereby leases to Lessee the Property described herein under the following terms and conditions:

1. TERM. This lease shall commence on the first day of construction on the Property and continue for a term of ninety-nine (99) years from the date of the signing of this lease. If construction

is not begun by January 4, 1999, this contract is null and void.

2. RENT. Lessee shall pay to Lessor the sum of Ten Dollars and No Cents (\$10.00) at the time of signing the lease. It is agreed that the Lessee is not responsible for any further payments of rent during the duration of the lease.

## 3. USE/MANAGEMENT.

A. Lessor grants to lessee the right to do specific acts of the Property as set out herein and Lessor retains all other rights to the Property that do not infringe on or impede the rights granted to Lessee.

- B. Lessor grants Lessee the right to construct a storm water detention basin, dry on the Property as defined on the engineering drawings for project 98-25. The detention area will function as a sedimentation basin and as an area for the removal of nutrients. Lessor agrees to Lessee's right to plant vegetation on the Property and to maintain control of the design elevation of the wetland. This paragraph B represents the Intended Use of the Property by the Lessee. The purpose of the Intended Use and construction as set out herein in more fully described in the Section 8 of the Design Report for the Tippecanoe Environment Lake and Watershed Foundation project 98-25, which is incorporated herein by reference.
  - C. Lessor grants to Lessee a fifteen (15) foot wide access easement as described herein:
    Access via the existing maintenance road along the north side of #12 fairway of the
    Lessor's golf course which maintenance road also runs in front of #12 tee station.
    continuing on the cartpath on the north side of the men's low level #8 tee station
    towards a westerly corner prior to #7 green in which the access easement shall turn
    southerly and run behind the ladies' #2 tee towards the Property.

Lessor grants to Lessee the right of ingress and egress to and from the Property from the access easement as well as reasonable access on, over, and along the said access easement for the purpose of the construction, inspection, maintenance and repair of the structures and vegetation on the Property. Lessor, for themselves, their heirs, assigns and administrators agree that they will do no construction or building on the access easement during the term of construction or without providing Lessee with an alternative access path to the Property. Lessee agrees to repair any construction or maintenance damage and to restore site to a condition equivalent to original conditions as determined

by photographs taken prior to construction.

- D. Lessor agrees that Lessee and its agents shall be permitted to enter onto the Property with such machinery, materials and equipment and the personnel and workers to operate said machinery and equipment to carry out the Intended Use of the Property by Lessee, including, but not limited to, the construction, inspection of, maintenance and repair of the earthern berm and basins and the planting of vegetation. It is agreed that all improvements shall stay with the land.
- E. Lessor agrees and its agents shall have the right to take such tests and borings on the Property as Lessee deems necessary to carry out its intended Use, and to take photographs of the Property.
- F. Lessor limits the rights granted to Lessee as follows: Lessee may enter onto the Property only for activities directly related to the Intended Use of the Property and not for the recreational use by Lessee and its agents.
- G. Rights to the Property shall be retained by Lessor as long as those activities do not interfere with or jeopardize the Intended Use of the Property by Lessee. In addition, Lessor agrees to refrain from altering the detention basin areas from that set out in the design defined in the Engineering Drawings for project 98-25.
- H. Lessee shall have use of Lessor's disposal area for equipment storage and for disposal of trees and shrubs. Lessor shall have use of the soil removed from the Property by Lessee.
- I. Lessee shall give notice to Lessor of its intention to enter onto the Property for purposes of inspection, maintenance and repair of the structures, detention basins, and vegetation of the Property. Lessee shall not enter Property without permission from Lessor, which permission will not be unreasonably withheld.
- 1. Upon completion of the detention basins, dry, Lessor will control use of the detention basin area. Lessor will manage and control plant and animal life on the Property. Lessor will provide all maintenance required on the Property as necessary to achieve and sustain the Intended Use of the Property as defined in section 3.B. of this lesse.
  - K. Lessee will introduce only plant life into the Property.
- 4. TAXES. Lessor shall pay all real property taxes and assessments due on the Property during the term of the lease.

5. CONDEMNATION. Lessor agrees that if the Property, or any part thereof, shall be taken or condemned for public or quasi-public use or purpose by any competent authority. Lessee shall have the right to defend against such attempted condemnation of the Property or any part thereof. If, in the opinion of Lessee, the Property becomes unmanageable or unsuitable for its Intended Use and Purpose as a result of such condemnation, this lease may be terminated by Lessee upon sixty (60) days written notice to Lessor.

## 6. LIABILITY/INSURANCE.

- A. Nothing in this lease shall be construed as imposing any additional liability on Lessor. Lessee shall name the Lessor as additional insured on Lessee's liability policy. Prior to the start of construction and throughout the term of the lease thereafter, Lessee shall carry a policy of public liability insurance covering all of its activities on the Property. At the request of Lessor, Lessee shall provide Lessor with a certificate or other evidence that such insurance is in effect.
- B. Lessee shall be responsible for and shall indemnify and hold Lessor harmless from any and all costs, including but not limited to the expense of defending any claim of legal action, related to any injury or damage to Lessee, Lessor or any other party or caused by or resulting from Lessee's activities on the Property.
- C. Lesses shall be responsible for all damages as a result of a failure of any earthen dams used in the construction of the detention basins unless such failure is a result of actions of the Lesson.
- SUB-LEASE/ASSIGNMENT. Lessee may not assign this lease or sublet all or any
  portion of the Property without the prior written consent of Lessor.

## 8. DAMAGES.

- A. Lessee shall restore all road surfaces owned by Lessor to its original condition if said surfaces are damaged by equipment and/or machinery used by Lessee and its agents during ingress and egress from the Property.
- B. Before final completion of the work on said premises. Lessee and its agents shall adequately clean up the construction site to the complete satisfaction of Lessor.
- C. This commitment pertains to construction, repair and maintenance done by Lessee and its agents on the Property.

- 9. EXPENSE. Lesses shall be responsible for all expenses incurred in the construction, repair, use, inspection and maintenance of the Intended Use of the Property by Lessee as set out in section 3 of this lease.
- 10. NO LIEN AGREEMENT. In consideration of the rems and covenants herein contained. Lessee, for itself and for all contractors, subcontractors, laborers, or persons performing labor upon or furnishing materials or machinery for the Intended Use of the Property as set out herein, agrees that;
- A. No lien shall attach to the Property or to Lessor's property, or to any structure or other improvement to be construed on the Property; and
- B. Any recording of this Agreement is intended solely for the purpose of giving proper notice as provided under IC 32-8-3-1 at seq.; and no lien whatsoever is created against the real estate as the result of the execution or recordation of this Agreement.
- 11. TRESPASS. Lessor grants to Lessee and its agents permission to enter onto the Property at any time to carry out its Intended Use as set out herein. All others shall be considered trespassers on the Property unless the party has the permission of Lessor and Lessee to be on the Property.

## 12. DEFAULT.

- A. Breach of any covenant contained herein shall constitute a default under this lease. In the event of a default, the defaulting party shall be entitled to thirty (30) days written notice specifying the nature of the default and giving the defaulting party an opportunity to cure the default. If the default is not corrected within thirty (30) days after notice is received, the injured party may elect to terminate this lease.
- B. If the use intended for the Property is not approved by any governmental agency having jurisdiction over the construction and maintenance of storm water detention basins, dry. Lessee and Lessor shall each have the right to terminate the lesse by giving written notice to the other party. Within sixty (60) days from the date the notice is received by Lessor, the lesse shall be null and void.
- C. If the construction for the Intended Use as set out in section 3 of this lease is not completed by March 31, 1999 from the date construction is begun, then Lessor has the right to give written notice to Lessoe to terminate the lease and Lessoe shall have fifteen (15) days in which to

complete the project as set out in section 3 of this lease. If the construction for the Intended Use is not accomplished within said fifteen (15) day period from the date the notice is received by Lessee, the lease shall be null and void. Provided however, that if Lessee's delay in construction is due to environmental factors out of its control (such as weather conditions), Lessee shall have thirty (30) days in which to complete the project as set out in section 3 of this lease agreement.

13. NOTICE. Any notice required by this lease shall be served upon the other party by mail at the address set forth below or at such other addresses as the parties may hereafter designate:

Tippecance Lake Country Club 7245 N. Kalorama Road Leesburg, Indiana 46538

Tippecance Environmental Lake and Watershed Foundation Post Office Box 55 North Webster, Indiana 46555

or to the acting president of said association at the address provided by Lessee to Lessor.

- 14. AGENTS. Where in this instrument rights are given to either the Tippecanoe Environmental Lake and Watershed Foundation or Lessors, such rights shall also extend to the agents or employees of the parties.
- 15. BINDING EFFECT. This lease shall become effective at the time construction on the Property begins and shall be binding upon Lassor, their heirs, personal representatives, successors and assigns and upon Lessee and Lessee's successor organizations.
- 16. TITLE. Lessor hereby represents and warrants that they are owners of the Property covered by this lease and that they have the right to enter into this lease and to bind themselves and their heirs, successors, assigns, and personal representatives.
  - 17. This lease shall be interpreted under the laws of the State of Indiana.
  - 18. Headings are for reference only and do not affect the provisions of this lease agreement.
  - 19. Where appropriate, the singular shall include the plural.
- 20. This lease agreement contains all of the agreements of the parties, all prior negotiations, understandings and agreements having been merged into it. Amendments of this lease agreement

shall not be effective unless made in writing and signed by the parties.

- 21. In computing a time period prescribed in this lease agreement, the day of the act or event shall not be counted. All subsequent days, including intervening weekend days and holidays, shall be counted in the period.
- 22. In the event the Tippecanoe Environmental Lake and Watershed Foundation should cease to exist, the lease shall be binding upon the organization that succeeds the said association, provided that the succeeding organization's membership consists of property owners of real estate on Tippecanoe Lake, Kosciusko County, Indiana.
- 23. This Agreement shall be recorded in the Office of the Recorder of Kosciusko County, Indians. The Lessee shall pay the recording fee.
- 24. Any porson signing this Agreement in a representative capacity for a party affirms under the penalties for perjury that he or she has the actual authority to so sign.

IN WITNESS WHEREOF, Lessor, Tippecanoe Lake Country Club, and Lessee, Tippecanoe Environmental Lake and Watershed Foundation, by their agents, have caused this Agreement to be executed on the day and year above first written with the following signatures.

TIPPECANOE ENVIRONMENTAL LAKE AND WATERSHED FOUNDATION

PRESIDENT

BY:

LESSEE

LESSOR

STATE OF INDIANA )	<b>S</b> :
COUNTY OF WHITLEY )	20 don of
Before me, a Notary Pub September, personally appeared T and each acknowledged the execu- deed.	lic in and for said County and State, on the 28 day of erry D. Schlotterback and Cayton 2. Krewker and tion of the above and foregoing Agreement to his voluntary act and
WITNESS my hand and	Notarial Seal.
	Any Suttle Novary Public Puidone of Voll (MILE County, Indiana
My Commission Expires:	Resident of Live County, many
of Directors, respectively, of having been duly sworn, ackn officer and a member of the bot Lake and Watershed Foundari September, 1998.	Public in and for said County and State, personally appeared president and member of Board president and member of Board Tippecanoe Environmental Lake and Watershed Foundation, who, owledged the execution of the above and foregoing Agreement as and of directors for and on behalf of said Tippecanoe Environmental ion and by authority of its board of directors this 29th day of
WITNESS my hand an	g Notatiat seat.
My Commission Expires:	Lindsey Argerbright Notary Public  Resident of Kosciusko County, Indiana
4-18-2008	Resident of Kosciusko County, Indiana

This instrument prepared by: Marcia A. McNagmy. Supreme Court ID # 15788-92. MYERS HOCKEMEYER & McNAGNY, 202 W Van Buren Street, Suite A. Columbia City, Indiana 46725. Telephone: (219) 248-2224.

## Χ.

## PROJECT FUNCTION

AND

VALUE

LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

## X. Project Function and Value

Four projects on three different streams entering the Lake Tippecanoe system have been proposed. Each project will address problems unique to the stream for which it is proposed.

## Indian Creek

On Indian Creek total phosphorus levels increased four-fold from 0.09 to 0.4 parts per million (ppm) during a storm event; however, empirical calculations determined that only 0.3% of the lake's phosphorus loading was coming from Indian Creek. Additional loading comes from suspended solids which went from 2.4 to 20.3 ppm during a storm event and fecal coliforms which went from 230 to 8090 colonies per 100 ml. Approximately 10% of the total suspended solids in Lake Tippecanoe come from Indian Creek. These figures were calculated from values given in Table 16 of the Lake Tippecanoe Diagnostic Study.

The proposed detention structures will eliminate 90% of the fecal coliform bacteria with a holding time of 24 hours in detention. Coliform bacteria generally do not survive more than 24 hours in open water. Phosphorus, nitrogen and total suspended solids are expected to decrease as much as 50% due to significantly reduced peak flows and erosion along the stream banks (see Preliminary Engineering Calculations - Sediment basin sizing). This should result in an approximate 5% reduction of sediment loading to the lake.

## Hanna B. Walker Ditch

Two projects have been proposed on the Hanna B. Walker Ditch to complement each other. The first is a back up sediment trap that has been designed to capture 50% of the sediments in the water column and be cleaned on a bi-annual basis. The second project is a combination sediment trap and nutrient filter that is designed for the same efficiency but, with a yearly cleaning requirement.

The diagnostic study found that the Hanna B. Walker Ditch has phosphorus measurements that went from less than 0.1 ppm to over 0.5 ppm during a storm event. Total nitrogen (TKN) went from 0.12 mg/l to 2.17 mg/l after the same event. These nutrients are mainly bound to sediments which was shown as an increase in total suspended sediment loads from 8.2 to 134.0 ppm during a storm event. Fecal coliforms are also a documented problem in the ditch showing counts as high as 2800 colonies per 100 ml of water after a storm event.

The proposed project will reduce overall sediment loads in Hanna B. Walker Ditch by as much as 75%. Assuming the efficiency of the sediment traps is maintained, they will have a net affect of reducing total lake sediment loads by 15-27 percent.

## Kuhn Ditch

The project proposed for Kuhn Ditch represents an attempt to reduce the sediment loading, nutrient loading and bacteria entering the Tippecanoe system from the ditch. Kuhn Ditch flows into the Tippecanoe River one-half mile upstream from Lake James. Kuhn Ditch had fecal coliform counts as high as 6,730 colonies per 100 ml, which presents a severe health hazard for water users. Additionally 6% of the total suspended sediment load, the highest mass loading of phosphorus for any tributary (600 mg/sec), and the highest concentration of nitrogen (2.7 ppm) during low flows, were documented in Kuhn Ditch. A sediment trap and wetland filter are proposed that would reduce suspended sediment loads by 50-75%, phosphorus by as much as 45% and nitrogen by 24%, averaged across all flow stages. This should result in a 3% reduction of sediment and a 1% reduction in phosphorus and nitrogen entering Lake Tippecanoe.

If all proposed projects are implemented, sediment entering Lake Tippecanoe will be reduced by 25 to 50% and the predicted phosphorus and nitrogen reduction is from 3 to 5%.

Negative ("-") removal efficiencies indicate net export in pollutant loads.

Table 2. AVERAGE REMOVAL EFFICIENCIES FOR TOTAL SUSPENDED SOLIDS AND NUTRIENTS IN WETLANDS REPORTED IN THE LITERATURE

			POLLUTANT REMOVAL EFFICIENCY (PERCENT)  TEC VSS TN TKN OZ N NH3 NO3 TP Ortho-P Dis P COD							BOD				
Study	System Name	System Type	TSS	VSS	TN	TKN	Org. N	NH3	NO3	ТР	Ortho-P	Dis, P	COD	SOL
			65	60	19		17	60	-17	33	57	76	7	
fartin and Smoot	Orange County	detention pond *	66	60	21		23	54	40	17	2	-30	18	
1986	<ul> <li>Treatment System</li> </ul>	wetland *	89	85	36		39	61	9	43	28	21	17_	
		entire system	83	- 00	-1.6		-24	62	80	7	-109			81
Harper et al. 1986	Hidden Lake	wetland			-1.0			57.5	68.1	60.9		75.1		
Reddy et al.	Lake Apopka	reservoirs				4.8			64.2	7.3		16.7		
1986		flooded fields				-7.6		51.9	33	62		10.1		35
Blackburn et al.	Palm Beach PGA Treatment System	system	50			16								
1986	Jackson Lake	system	96		76			37	70	90		78		
Esry and Cairns 1988			95	78	-20		36	0		37		28		
Brown	Fish Lake	wetland/pond			38		-36	50		27		25		
1985	Lake Elmo	wetland	88	80	20		-30 7	25		-43		-30		
	Lake Riley	wetland	-20	20			11	-86		-7		-10		
	Spring Lake	wetland	300	-20	-14		- 11	-80	60	78		57	90	
Wotzka and Obert	McCarrons Wetland	detention pond *	91	95	85	88			22	36		25	79	
1988	Treatment System	wetland *	87	87	24	26			63	78		53	93	
		system	94	94	83	85		-44	- 03	78				
Hickok et al. 1977	Wayzata Wetland	wetland	94											
Barten	Clear Lake	wetland	76			25		55		54	52	40		
1987														
Meiorin	DUST Marsh	wetland *	63			22		-8	32	46	65			-2
1986	Basin A	wetland *	40			-27		-5	2	-4	28			-4
	Basin B	wetland *	51			-1		18	12	36	37			-)
	Basin C	wetland	76			-1		16	29	58	. 68			-9
	System	wetland	54			-20		20	50	5				
Morris et al.	Angora Creek	wetland	36			-88		33	35	-120				
1981	Tallac Creek	detention pond *	39			14				23				
Scherger and Davis	Pittsfield-Ann Arbor	wetland	76			20				49				
1982	Swift Run	wetland	87	85	37					-6				5
ABAG	Palo Alto Marsh	wettand												
1979	V. V. Wadand St. of	entire system	95	94		_				92				
Jolly	Long Lake Wetland-Pond	енше аумеш	,,,	- *										
1990	Treatment System	detention pond *	63	50	5	7			1	7	. 20	-14		
Oberts et al.	Tanners Lake	detention ponds *	85	57	14	15			11	34	34	12		
1989	McKnight Lake	wetland	85	67	24	28			17	37	-5	8		
	Lake Ridge		20	1	-6	-10			9	1	-3	1_		
	Carver Ravine	wetland-pond system wetland	14						4	-2				
Reinelt et al.	B3I	wettand	56						20	-2				
1990	PC12	wetland	64				-3.7			55	65			
Rushton and Dye 1990	Tampa Office Pond													
Hey and Barrett	Des Plaines River Wetland		-						70	59				
1991	EWA 3	wetland	72						42	55				
	EWA 4	wetland	76						70	69				
	EWA 5	wetland	89						95	97				
	EWA 6	wetland	98	79	24	. 5	7	33	46	46	28	23	55	

## REFERENCES

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- Warwick, J.J., D. Spinogatti, T. Jones. 1998 "Evaluating the Efficacy of Artificial Wetlands for Tertiary Treatment." Wetlands Engineering and River Restoration Conference.

# XI. VEGETATION AND WETLAND SURVEY

LAKE TIPPECANOE FEASIBILITY STUDY KOSCIUSKO COUNTY, INDIANA

## XI. VEGETATION AND WETLAND SURVEY

Indian Creek - At proposed retention basins on Tippecanoe Country Club.

Vegetation Present - 100% ground cover, 63% canopy cover, none in waterways.

Banks:	Common Name	Scientific Name
	Sweet cicely	Osmomiza claytonii
	Wild geranium	Geranium maculatum
	Blue phlox	Phlox divaricata
	May apple	Podophyllum peltatum
	Large flowered trillium	Trillium grandiflorum
	Virginia water leaf	Hydrophyllum virginianum
	Common woodreed	Cinna arundinacea
	Virginia creeper	Parthenocissus quinquifolia
	Blue beech	Carpinus caroliniana
	Ironwood	Ostrya virginiana
	Sassafras	Sassafras albidum
	Green ash	Fraxinus pennsylvanicum
	Sugar maple	Acer saccharinum
	Black cherry	Prunus serotina
	Red oak	Quercus rubra
	American elm	Ulmus americana
	Basswood	Tilia americana

Wetlands Present - 10 x 20 foot seep on edge of stream

American elderberry Sambucus canadensis
Spicebush Lindera benzoin
Jewel weed Impatiens capensis

The wetland functions only as a ground water discharge zone to the creek. Due to its small size its wildlife habitat and nutrient filtering functions are extremely limited. It likely serves to add nutrients to the stream rather than filter them, as organic matter is picked up from the overland flow as it seeps out of the slope to the creek. Since the wetland is on a slope, it does not function to store stormwater. The recreational and aesthetic values of this wetland are non-existent due to its small size.

## Hanna B. Walker Ditch - At Pamala and Kevin Gilbert's south propertly line

The stream at the proposed project location is approximately four feet in width and a few inches in depth. This meanders through unvegetated sand bars in between the spoil banks which rise up about six feet above the stream on either side, or about three feet above normal grades.

Riparian Zone - 3-5 feet wide above low water elevation, fringe wetland.

Scientific Name
Lysimachia mummularia Cinna arundinacea
Impatiens sp.
Parthenocissus quinquefolia Acer saccharinum Iris versicolor

Spoils Zone - 25 - 35 foot wide, upland

Green Ash	Fraxinus pennsylvanica
Black walnut	Juglans nigra
Hackberry	Celtis occidentalis
Stringing nettle	Urtica dioica
hairy sweet sicely	Ozmorhiza claytonii
Virginia creeper	Parthenociussus quinquefolia
White avens	Geum canadense

Natural grades - beyond spoils

Blackberry	Rubus sp.
Black locust	Robinia pseudocacia
Multiflora rose	Rosa Multiflora
Fescue	Festuca sp.

## Hanna B. Walker Ditch - YMCA Camp Crosley south property line.

A maintained lawn exists up to a one foot vertical embankment. A few native wetland sedges were noted growing from the bank and the water column was filled with water milfoil and algae.

## Kuhn Ditch - Richard White property

	Common Name	Scientific Name
Ditch Banks	Box elder	Acer negundo
	Silver maple	Acer saccharinum
	Mulberry	Morus spp.
	Goldenrod	Solidago spp.
	Reed canary grass	Phalaris arundinacea
Open Field (Proposed	Reed canary grass	Phalaris arundinacea
wetland filter)	Tall nettle	Urtica procera
	Sedge	Carex spp.
Wetland Area (To be	Silver Maple	Acer saccharinum
avoided)	Cottonwood	Populus deltoides
	Sandbar willow	Salix interior
	Fox sedge	Carex vulpinodea

## Hanna B. Walker Ditch - Richard Clay property

	Common Name	Scientific Name
Existing Open Water (To be revegetated or excavated)	Coon tail	Ceratophyllum demersum
Proposed Stream Channel Relocation Area	Fescue Tall nettle Reed canary grass	Festuca spp. Urtica diocia Phalaris arundinacea
Proposed Filter Outflow Area (Wetland)	Elderberry Grey dogwood Jewel weed Reed canary grass Hog peanut	Sambucus canadensis Cornus foemina Impatiens spp. Phalaris arundinacea Amphicarpaea bracteata

## XII. BIOLOGICAL ASSESSMENT OF PROJECT AREAS

LAKE TIPPECANOE FEASIBILITY STUDY KOSCIUSKO COUNTY, INDIANA

## XII. Biological Assessment of Project Areas

## Indian Creek

Indian Creek begins from several drainage tile outlets at the south edge of the second fairway on Tippecanoe Country Club. These drainage tiles within the project boundaries result in four foot wide intermittent flows that are from one to four feet below grade. The channel bottoms are organic matter over clay loam with no vegetation. Mature trees form approximately 75% average canopy cover and herbaceous vegetation layer forms about 100% coverage. No fish or invertebrates were sampled due to the small size of the drainage. No endangered, threatened, or rare species are known to exist at this project site according to an IDNR search of the National Heritage database (Diagnostic Study).

### Hanna R. Walker

The Hanna B Walker Ditch originates from grassed waterways and tile drains within a mile of the project site. The stream forms a legal drain at the intersection of C.R. 650 North and 500 West that has been excavated three to four feet below its natural levels. This ditching has eliminated the storage and filtering capacity of former floodplain wetlands that were found at this site. The fish species were limited to creek chub and blacknose dace. Scuds were the most common invertebrate along with midges. No valuable timber or native plant communities exist in the project area. No endangered, threatened, or rare species are known to occur at this project site (Diagnostic Study).

## Kuhn Ditch

Kuhn Ditch drains about two square miles above the project site, forming a ditch about four feet wide and several inches deep during low flows. The bottom of the ditch is shifting sands and fine gravel. Fish inhabiting the stream include creek chub, Johnny and rainbow darters, log perch, bluegill, and blacknose dace as sampled using a backpack pulsed D.C. shocking unit. The gravel pit has matured and filled in with sediments to about two feet deep. It is vegetated with coontail. No endangered, threatened, or rare species are known to occur at this project site according to the National Heritage database (Diagnostic Study).

## RESULTS OF ELECTROSHOCKING SURVEY MAY 14, 1998

Species	<b>Quantity</b>	Size (mm)
Hanna B. Walker Drain at 650 North		
Blacknose dace	5	34-80
Creek chub	17	25-95
Kuhn Ditch at 600 North		
Blacknose dace	7	80-90
Blue Gill	1	52
Creek Chub	11	25-170
Johnny Darter	3	40-54
Log Perch	7	70-105
Rainbow Darter	3	35-55
Unknown	4	60-75

## XIII. ADDITIONAL FUNDING SOURCES

LAKE TIPPECANOE FEASIBILITY STUDY KOSCIUSKO COUNTY, INDIANA

## XIII. ADDITIONAL FUNDING SOURCES

Potential funding sources for the proposed projects on Lake Tippecanoe include Section 319 Grants, Section 104(b)(3) Grants, the Wetlands Reserve Program, the Wildlife Habitat Incentives Program, Environmental Grants from Northern Indiana Public Service Company (NIPSCO), and IPALCO Golden Eagle Environmental Grants. More significantly, the Tippecanoee Environmental Lake and Watershed Foundation has raised \$70,000 to match Lake and River Enhancement funding and set up a manintenance endowment for these projects..

The Section 319 Nonpoint Source Program is funded by the US Environmental Protection Agency and administered by Indiana Department of Environmental Management to provide funding for nonpoint source (NPS) water management projects. This funding is available to governmental units and nonprofit organizations. To qualify, the water body of the project must be located on a listing of Indiana's high priority water bodies or be reported as having nonpoint source pollution in the State of Indiana 305(b) Report. Lake Tippecanoe is on the list of high priority water bodies and therefore qualifies for a Section 319 Grant. A local match of at least 25% of the project cost is required. This match can be either in-kind services or cash. It is necessary for the grant awardee to have enough start up funds for the initial project costs prior to receiving State funds, as there are no provisions for the payment of charges prior to the actual completion of work. For the 1999 fiscal year, the maximum request for funding was \$112,500. In addition, a Quality Assurance Project Plan (QAPP) is also required. The QAPP describes the objective of a project and the procedures to be followed to ensure that the data generated will serve those objectives. The project should not exceed 24 months unless preapproved by IDEM. All applications are reviewed by IDEM and then ranked by a committee composed of representatives from various agencies and organizations in the State associated with NPS programs. The highest ranked applications are forwarded to the USEPA for final consideration

Section 104(b)(3) Watershed Project Grants is also funded by the USEPA and administered by IDEM to provide funding for the reduction and elimination of pollution at the state level. Priorities in selecting projects for funding include projects which directly promote environmental results within watersheds and projects that directly promote community based environmental protection. A 5% match of the total cost of the project is required. In addition, a QAPP is also required.

The Wetlands Reserve Program (WRP) is administered by the US Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS). This program provides funding for restoration of wetlands on agricultural land. To be eligible for WRP, land must be restorable and suitable for wildlife benefits. This includes wetlands that are farmed under natural conditions, farmed wetlands, prior converted cropland, farmed wetland pasture, farmland that has become a wetland as a result of flooding, riparian areas which link protected wetlands and land adjacent to protected wetlands that contribute significantly to wetland functions and values.

The NRCS also administers the Wildlife Habitat Incentives Program (WHIP). This program provides technical assistance and cost-share payments to help develop a plan for establishing and improving fish and wildlife habitat. The plan may also be part of a larger plan that addresses other resource needs such as water quality and soil erosion. All lands are eligible for WHIP except federal land, land currently enrolled in Wetlands Reserve Program or similar programs, land subject to and Emergency Watershed Protection Program floodplain easement, and land where USDA determines that impacts from onsite or offsite conditions make the success of habitat improvement unlikely.

The Environmental Grants program sponsored by NIPSCO promotes ecological restoration that will provide a public benefit. Grants are awarded biannually, with the next grants scheduled to be awarded in October, 1998. Applications are due by September. Grants range between \$2,000 and \$5,000.

The IPALCO Golden Eagle Environmental Grant is sponsored by IPALCO Enterprises, Inc., which is the parent company of Indianapolis Power & Light Company and is administered by the Indiana Park and Recreation Association. Grants are available to not-for-profit organizations and governmental units for projects which preserve, protect, enhance or restore environmental and biological resources. Grants are available for up to \$10,000. All applications are evaluated based on criteria such as environmental impact, general quality, public impact, creativity and transferability, and cost/benefit ratio.



June 24,1998

Jim Ray Indiana Department Of Natural Resources Division Of Soil Conservation 402 W. Washington St., Rm. W265 Indianapolis, IN 46204

> Re: Tippecanoe Environmental Lake & Watershed Foundation Cost Share Lake & River Enhancement Grant

Dear Mr. Ray,

Tippecanoe Environmental Lake & Watershed Foundation (TELWF) is offering a 30% cost share funding for consideration of our application for design/construction. Based on estimates of total project costs 30 % would amount to approximately \$100,000.00.

TELWF is starting their fourth week of fund raising efforts. We are very pleased to state that these projects have been well received and our donations reflect the level of interest by the property owners. TELWF has been targeting selected donors in this initial drive. At present 28 property owners have been contacted and donations received to date are in the amount of \$70,000.00. Our next phase of our fund drive will be a mass mailing to property owners, lake users and lake related industry. We feel confidant that we will be able to meet our 30% cost share by the end of the summer season. If for any unforeseen reason we are unable to accomplish our goal of \$100,000.00 by the end of the summer season we have the backing of the Lake Tippecanoe Property Owners, Inc. treasury in the amount of \$30,000.00.

TELWF has set a goal to raise \$200,000.00 by the year 2000. We will be establishing an endowment trust for land lease agreements, easements rights, maintenance of the projects and for future endeavors.

All donations received are being handled by Lake City Bank. They are held in trust and receipts and disbursements are made by the trust officer. Lake City Bank also will do all the reporting to the IRS and Indiana Department of Revenue in order to maintain our non-profit status (501c3).

Enclosed are the pamphlets for education, flip chart for explanation of our fund raising goals and pledge cards.

Thank you for allowing TELWF to participate in The Lake & River Enhancement program.

Sincerely,

Robert Smith, President

Holly LaSalle, T-By-2000 Coordinator

enc.

cc. J.F. New & Associates, Inc.



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TO:

APPLICATIONS FOR THE

FFY 1999 SECTION 319 NONPOINT SOURCE WATER MANAGEMENT

GRANT PROGRAM

FROM:

SHAREN JARZEN, SECTION CHIEF

WATERSHED MANAGEMENT SECTION

DATE:

**DECEMBER 29, 1997** 

SUBJECT:

INFORMATION FOR PREPARING GRANT APPLICATIONS

Outlined below are general guidelines which are intended to aid you in completing your grant application for funding through the FFY 1999 Section 319 Nonpoint Source Program. Your completed application must be submitted on the form provided (Attachment I) or on a photocopy of this form only. Please return one copy of the completed application. Do not add or delete any pages or parts of the application form. All applications must be submitted with a postmark no later than March 31, 1998.

<u>Instructions</u> for completing the application are included in Attachment II. Additionally, a <u>sample</u> of a completed application has been included as Attachment III for your reference. The sample is intended only as a guide; the content of your proposal may be much different. Due to the limited time available within the application review process, blank or improperly completed spaces may result in your application being returned for more information, causing a delay in processing.

## ELIGIBILITY CONSIDERATIONS

- Eligible Parties Eligibility for Section 319 funding is limited to governmental units (such as towns, cities, counties, and state agencies) or nonprofit organizations (such as universities and citizen conservation groups).
- 2. Objectives and Key Action Steps To qualify for Section 319 funding, your project must comply with the objectives found in the Indiana Nonpoint Source (NPS) Water Pollution Management Program Plan as directed by the U.S. Environmental Protection Agency (USEPA). Attachment IV is a summary of the objectives of the plan with key action steps to be taken. Your proposal must conform with one or more of these steps. Attachment IV serves as the State guideline for NPS projects.

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3. Priority Water Bodies - Attachment V is a listing of Indiana's high priority water bodies. Please verify that any water bodies affected by your project can be found on this list. Water bodies not included on this list, but reported as having nonpoint source pollution in the State of Indiana 305(b) Report, are also eligible for Section 319 funding. If your project does not affect a water body mentioned on the list, please contact the Indiana Department of Environmental Management (IDEM) staff so that it can be determined if you are eligible through the Indiana 305(b) Report.

## ADDITIONAL CONSIDERATIONS

- Targeted Areas This year the Office of Water Management of the IDEM is targeting the Wildcat Creek watershed. Projects located in this basin are encouraged, although of course, consideration will be given to all areas of the State. For any project submitted, describe specifically how your project will address water quality concerns in your area.
- 2. Emphasis on Implementation Emphasis is being placed on projects that focus on implementation rather than development activities such as research and assessment studies. However, this does not preclude research studies. But, in order to maximize the chance of funding this type of project, the research should be tied to the actual construction of a project. For example, a NPS water pollution control measure could be constructed and then monitored in order to obtain some type of data from it. If you are planning a project which primarily focuses on research, monitoring, or assessment, please contact the IDEM before beginning your application.
- 3. Starting Dates When considering a beginning date for your project, plan for it to begin no earlier than July 1, 1999. This is to allow time for the award of grant money to the State by the USEPA, and for the execution of State contracts necessary to begin the project. Later starting dates are acceptable. The length of your project may not exceed twenty-four (24) months unless preapproved by the IDEM. Please contact a NPS Program staff member listed at the end of this letter should you wish to discuss this further.
- 4. Public Outreach/Involvement In order for your project to maximize its effectiveness, it is important to have support at the local level. Therefore, a public outreach component is required as part of any project application. Some projects will naturally lend themselves to a public outreach element. Regardless of your particular approach, ensure that the public is informed and/or educated by your project in some manner.
- 5. Project Monitoring and Quality Assurance/Quality Control (QA/QC) The IDEM requires appropriate monitoring of every Section 319 project. This is to document the effectiveness of BMP's and projects. Accepted monitoring approaches include: biological/habitat assessments; ambient water quality monitoring; audits; activity tracking; surveys; geographic information system tracking; model projections; and photographic evidence. Additionally, the USEPA requires a Quality Assurance Project Plan (QAPP) for

every project which generates environmental data which is chemical or biological in nature. A QAPP describes the objectives of a project and the procedures to be followed to ensure that the data generated will serve those objectives. The contractor should submit a draft QAPP to the Watershed Management Section of the IDEM as soon as feasible after receiving notification of their grant award. Data collection should not begin until the plan has been approved. For further information concerning QA/QC, contact Ms. Carol Newhouse of the Watershed Management Section at 317/232-0013.

- 6. Quantification of Tasks and Products For an accurate representation of the proposed tasks listed in your application, please provide the number, time(s), and/or location(s) of all activities, such as the number of workshops, time and/or frequency of sampling, or locations of public outreach or monitoring components.
- 7. Products to be Produced When project proposals are reviewed for funding purposes, one of the primary review points is to look at the products that will result from the project. Clearly state the products which will result from your project (see #19 on the application form). Please note that the USEPA lists four factors as indicators of a project's progress and success. These are:
  - Implementation of NPS controls;
  - b. NPS pollutant load reduction;
  - c. Water quality improvement from NPS controls; and
  - d. Public education, awareness, and action.

Also, quantitative indicators (where applicable) demonstrating the effectiveness of your project components should be included in the application.

8. Cost-Share Requirements - Standard requirements have been established for cost-share projects (Attachment VI). The IDEM has established standard forms and procedures for cost-share projects. If your application includes cost-share payments for the installation of best management practices (BMPs), you should request a copy of the IDEM's cost-share forms. The cost-share provided by Section 319 funds cannot exceed 75 percent of the cost for the BMP.

#### PERMITS

The U.S. Army Corps of Engineers Section 404 permit, the Indiana Department of Natural Resources permit for construction in a floodway, and the IDEM's Section 401 review may be required to conduct certain watershed resource restoration projects. Ample time should be allotted (at least six

months) in the project time-frame to obtain any required permits if they have not already been received.

Please note that Section 319 funds are primarily used for nonregulatory programs. However, certain activities in relation to regulatory programs such as technical assistance, education, and training may be eligible. Before considering a proposal for any regulatory program, please contact the IDEM staff mentioned at the end of this letter, as not all regulatory activities are eligible.

#### PROPOSALS FOR URBAN STORMWATER CONTROL

Projects that include controlling NPS pollution of urban stormwater (not regulated by NPDES permits) are eligible. These project activities may include technical assistance, monitoring, source and runoff control BMP's, information and education programs, technology transfer and training, and development and implementation of policies and regulations to address stormwater runoff.

#### PROJECT FUNDING CONSIDERATIONS

- 1. Matching Funds A match is required of at least 25 percent of the total cost of the project, unless the application is submitted by a federal agency. This will maximize the total funds that Indiana receives. This match can be either in-kind services or cash. In-kind services, for example, can be staff costs, a landowner's share of BMPs, or use of local equipment. For those projects which will utilize staff time, this can be an easily accessible way to provide the match. However, a match cannot be provided by either federal funds or by any funds which are being used as a match for another federal grant. If your organization is a federal agency, try to provide a match, if possible, by cooperating with a State or local organization on a project.
- Cooperating Organizations/Agencies If other organizations are contributing either an inkind services or cash match for your project, a letter of commitment from that organization must be included with the application. If other organizations support the project, but are not committing part of the match, their letters of support should also be attached.
- 3. Payments There are no provisions for the payment of charges prior to the actual completion of work. It is necessary for your organization/agency to have enough start-up funds for the project in order to pay for the initial project costs prior to receiving State funds. Once the project begins, invoices can be submitted for completed work as often as necessary. Allow at least eight weeks for each invoice to be paid by the State.
- 4. Maximum Request of 319 Funding It is recommended that you apply for no more than a maximum of \$112,500 in Section 319 funding per project. This would entail a match of at least \$37,500 (25 per cent) per project. However, a match, of course, can exceed this amount. An organization/agency may submit as many grant applications as it desires, provided that each application requests no more than \$112,500 in Section 319 funds. Small and large

project proposals will receive equal consideration. Smaller proposals are encouraged. Each project must be submitted on a separate application form.

5. Indirect Costs - No indirect or overhead charges will be acceptable if submitted by another State agency or a State University.

#### APPLICATION SUBMISSION AND REVIEW PROCESS

 Submissions - Your project application containing all the above information must be submitted to the IDEM postmarked no later than March 31, 1998. Submit your original completed application to:

> Sharen Jarzen, Section Chief Indiana Department of Environmental Management Office of Water Management Watershed Management Section Post Office Box 6015 Indianapolis, Indiana 46206-6015

- Review of Applications After the applications are submitted, they will be reviewed and ranked with the selected ones being submitted to the USEPA for funding consideration.
- Notification You will be notified by mail whether or not your proposal has been selected for funding.

The IDEM staff will be happy to discuss any concerns you may have, either over the telephone or by arranging a meeting. If you have any questions, need assistance in preparing your proposal, or would like a list of the FFY 1998 projects, please contact Mr. Doug Campbell at 317/233-8491, or Ms. Jill Reinhart at 317/233-8803.

Thank you for your interest in the Section 319 Nonpoint Source Water Management Program.

Attachments

#### Natural Resources Conservation Service

People in Partnership for a Healthy Land



#### Fact Sheet Wetlands Reserve Program

Provide recreational opportunities.

The Wetlands Reserve Program (WRP) is a *voluntary* program to restore and protect wetlands on private property. It is an opportunity for landowners to receive financial incentives to enhance wetlands in exchange for retiring marginal agricultural land.

#### How Does WRP Benefit You? Wetland Functions and Values You will. Providing fish and wildlife habitat: Receive financial compensation; • Improving water quality by filtering Enhance wetland values that benefit you sediments and chemicals: and society: Reducing flooding: · Reduce problems associated with farming · Recharging groundwater; potentially difficult areas; · Protecting biological diversity; and • Practice conservation stewardship; and Furnishing educational, scientific.

#### Background

Congress authorized WRP under the Food Security Act of 1985, as amended by the 1990 and 1996 Farm Bills. The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) administers the program in consultation with the Farm Service Agency (FSA) and other Federal agencies. Funding for WRP comes from the Commodity Credit Corporation.

recreational, and esthetic benefits.

#### Sign-up

States were authorized to begin a continuous sign-up as of October 1, 1996. Check with your local USDA Service Center or conservation district office for the sign-up schedule in your State.

#### How the Program Works

Landowners who choose to participate in WRP may sell a conservation easement or enter into a cost-share restoration agreement with USDA to restore and protect wetlands. The landowner voluntarily limits future use of the land, yet retains private ownership. The landowner and NRCS develop a plan for the restoration and maintenance of the wetland.

The program offers landowners three options: permanent easements, 30-year easements, and restoration

cost-share agreements of a minimum 10-year duration.

Permanent Easement. This is a conservation easement in perpetuity. Easement payment will be the lesser of: the agricultural value of the land, an established payment cap, or an amount offered by the landowner. In addition to paying for the easement, USDA pays 100 percent of the costs of restoring the wetland.

30-Year Easement. This is a conservation easement lasting 30 years. Easement payments are 75 percent of what would be paid for a permanent easement. USDA also pays 75 percent of restoration costs.

Restoration Cost-Share Agreement. This is an agreement (generally for a minimum of 10 years in duration) to re-establish degraded or lost wetland habitat. USDA pays 75 percent of the cost of the restoration activity. This does not place an easement on the property. The landowner provides the restoration site without reimbursement.

Other agencies and private conservation organizations may provide additional assistance for easement payment and wetland restoration costs as a way to reduce the landowner's share of the costs. Such special partnership efforts are encouraged.

#### Eligibility

Landowner. To offer a conservation easement, the landowner must have owned the land for at least 1 year prior to enrolling the land in the program unless the land was inherited or the landowner can prove the land was not obtained for the purpose of enrolling it in the program. To participate in a restoration cost-share agreement, the landowner must show evidence of ownership.

Land. To be eligible for WRP, land must be restorable and be suitable for wildlife benefits. This includes:

- · Wetlands farmed under natural conditions;
- · Farmed wetlands:
- Prior converted cropland;
- · Farmed wetland pasture;
- Farmland that has become a wetland as a result of flooding:
- Rangeland, pasture, or production forestland where the hydrology has been significantly degraded and can be restored:
- · Riparian areas which link protected wetlands;
- Lands adjacent to protected wetlands that contribute significantly to wetland functions and values;
- Previously restored wetlands (Conservation Reserve Program [CRP] land is eligible if it meets WRP requirements).

Ineligible Land. Ineligible land includes wetlands converted after December 23, 1985; lands with timber stands established under a CRP contract; Federal lands; and lands where conditions make restoration impossible.

#### Uses of WRP Land

A landowner continues to control access to the land--and may lease the land--for hunting, fishing, and other undeveloped recreational activities. At any time, a landowner may request that additional activities be evaluated to determine if they are compatible uses for the site. This request may include such items as permission to cut hay, graze livestock or harvest wood products. Compatible uses are allowed if they are fully consistent with the protection and enhancement of the wetland.

#### Cooperating Agencies

Additional information on WRP is available from USDA Service Centers, State Cooperative Extension

offices, and local conservation districts.

#### RESTORING AMERICA'S WETLAND HERITAGE-IT'S IN YOUR HANDS.

NRCS homepage | USDA homepage |



United States Department of Agriculture

Natural Resources Conservation Service

#### Wetland Reserve Program (WRP)

The Wetlands Reserve Program (WRP) is a voluntary program to restore and protect wetlands on private property. It is an opportunity for landowners to receive financial incentives to enhance wetlands in exchange for retiring marginal agricultural land. Congress authorized WRP under the Food Security Act of 1985, as amended by the 1990 and 1996 Farm Bills. The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) administers the program in consultation with the Farm Service Agency (FSA) and other federal agencies. Funding for WRP comes from the Commodity Credit Corporation. States were authorized to begin a continuous sign-up as of October 1, 1996. Check with your local USDA Service Center or conservation district office for the sign-up schedule in your state.

Landowners who choose to participate in WRP may sell a conservation easement or enter into a cost-share restoration agreement with USDA to restore and protect wetlands. The landowner voluntarily limits future use of the land, yet retains private ownership. The landowner and NRCS develop a plan for the restoration and maintenance of the wetland. The program offers landowners three options: permanent easements, 30-year easements, and restoration cost-share agreements of a minimum 10- year duration.

Permanent Easement -- This is a conservation easement in perpetuity. Easement payment will be the lesser of the agricultural value of the land, an established payment cap, or an amount offered by the landowner. In addition to paying for the easement, USDA pays 100 percent of the costs of restoring the wetland.

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Other agencies and private conservation organizations may provide additional assistance for easement payment and wetland restoration costs as a way to reduce the landowner's share of the costs. Such special partnership efforts are encouraged.

To offer a conservation easement the landower must have owned the land for at least 1 year prior to enrolling the land in the program unless the land was inherited or the landowner can prove the land was not obtained for the purpose of enrolling it in the program. To participate in a restoration cost-share agreement, the landowner must show evidence of ownership. The land must be restorable and be suitable for wildlife benefits. Eligible land includes: wetlands farmed under natural conditions; farmed wetlands; prior converted cropland; farmed wetland pasture; farmland that has become a wetland as a result of flooding; rangeland, pasture, or production forestland where the hydrology has been significantly degraded and can be restored; riparian areas which link protected wetlands; lands adjacent to protected wetlands that contribute significantly to wetland functions and values; and previously restored wetlands (Conservation Reserve Program [CRP] land is eligible if it meets WRP

requirements).

Ineligible land includes wetlands converted after December 23, 1985; lands with timber stands established under a CRP contract; Federal lands; and lands where conditions make restoration impossible.

A landowner continues to control access to the land—and may lease the land—for hunting, fishing and other undeveloped recreational activities. At any time, a landowner may request that additional activities be evaluated to determine if they are compatible uses for the site. This request may include such items as permission to cut hay, graze livestock or harvest wood products. Compatible uses are allowed if they are fully consistent with the protection and enhancement of the wetland.

Additional information on WRP is available from <u>USDA Service Centers</u>, State Cooperative Extension offices, and local conservation districts.

The WRP will have an enrollment cap of 975,000 acres. Program changes provide more flexibility and help landowners work toward a goal of no net loss of wetlands.

#### The revised WRP:

- Requires that, beginning October 1, 1996, one-third of total program acres
  be enrolled in permanent easements, one-third in 30-year easements, and
  one-third in restoration only cost- share agreements. Individuals may
  choose the category for their eligible land.
- Stipulates that effective October 1, 1996, no new permanent easements may be enrolled until at least 75,000 acres of temporary easements have entered the program.
- Provides landowners with 75 percent to 100 percent cost-sharing for permanent easements, 50 percent to 75 percent for 30- year easements, and 50 percent to 75 percent for restoration cost-share agreements. Costsharing will help pay for restoration.

NRCS Homepage | Conservation Programs

http://www.ftw.nrcs.usda.gov/pl566/WRP.html October 8, 1997

#### Natural Resources Conservation Service

People in Partnership for a Healthy Land



#### Fact Sheet

## Wildlife Habitat Incentives Program (WHIP)

This information is based on the final rule for the Wildlife Habitat Incentives Program (WHIP) published in the Federal Register, September 19, 1997. The WHIP rule can be viewed on the World Wide Web at <a href="http://www.nrcs.usda.gov">http://www.nrcs.usda.gov</a>.

FSA - Farm Service Agency

NRCS - Natural Resources Conservation Service

USDA - U.S. Department of Agriculture

WHIP - Wildlife Habitat Incentives Program

#### Background

The Wildlife Habitat Incentives Program (WHIP) is a voluntary program for people who want to develop and improve wildlife habitat primarily on private lands. It provides both technical assistance and cost-share payments to help establish and improve fish and wildlife habitat.

#### How WHIP Works

Participants who own or control land agree to prepare and implement a wildlife habitat development plan. The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) offers participants technical and financial assistance for the establishment of wildlife habitat development practices. In addition, if the landowner agrees, cooperating State wildlife agencies and nonprofit or private organizations may provide expertise or additional funding to help complete a project.

#### The Plan

NRCS helps participants prepare a wildlife habitat development plan in consultation with the local conservation district. The plan describes the landowner's goals for improving wildlife habitat, includes a list of practices and a schedule for installing them, and details the steps necessary to maintain the habitat for the life of the agreement. This plan may or may not be part of a larger conservation plan that

addresses other resource needs such as water quality and soil erosion.

#### Cost-Share Assistance

USDA and the participant enter into a cost-share agreement for wildlife habitat development. This agreement generally lasts from 5 to 10 years from the date the agreement is signed. Under the agreement:

- The landowner agrees to install and maintain the WHIP practices and allow NRCS or its agent access to monitor the effectiveness of the practices.
- USDA agrees to provide technical assistance and pay up to 75 percent of the cost of installing the wildlife habitat practices.

Cost-share payments may be used to establish new practices or replace practices that fail for reasons beyond the landowner's control.

#### Eligibility

Eligible participants include those who own or have control of the land under consideration. All lands are eligible for WHIP, except:

- Federal land;
- Land currently enrolled in the Water Bank Program, Conservation Reserve Program, Wetlands Reserve Program, or other similar programs;
- Land subject to an Emergency Watershed Protection Program floodplain easement; and
- Land where USDA determines that impacts from onsite or offsite conditions make the success of habitat improvement unlikely.

#### Mitigation

WHIP funds cannot be used for mitigation or on land designated as converted wetland.

#### WHIP Funding

WHIP is currently budgeted for \$50 million total through the year 2002.

WHIP funds are distributed to States based on State wildlife habitat priorities, which may include wildlife habitat areas, targeted species and their habitats, and specific practices. WHIP may be implemented in cooperation with other Federal, State, or local agencies; conservation districts; or private conservation groups. State priorities are developed through a locally led process that identifies wildlife resource needs and finalized in consultation with the State Technical Committee.

#### For More Information

NRCS; Farm Service Agency; Cooperative State Research, Education, and Extension Service; or your local conservation district can provide more information. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture. Information is also available on NRCS's World Wide Web site: <a href="http://www.nrcs.usda.gov">http://www.nrcs.usda.gov</a>.

| NRCS homepage | USDA homepage | NACD homepage |



United States Department of Agriculture

Natural Resources Conservation Service

#### Watershed and River Basin Planning and Installation Public Law 83-566 (PL566)

Technical and financial assistance is provided in cooperation with local sponsoring organizations, state, and other public agencies to voluntarily plan and install watershed-based projects on private lands. The program empowers local people or decisionmakers, builds partnerships and requires local and state funding contributions. The purposes of watershed projects include watershed protection, flood prevention, water quality improvements, soil erosion reduction, rural, municipal and industrial water supply, irrigation water management, sedimentation control, fish and wildlife habitat enhancement and create and restore wetlands and wetland functions.

Watershed plans involving an estimated Federal contribution in excess of \$5,000,000 for construction, or construction of any single structure having a capacity in excess of 2,500 acre feet, require Congressional committee approval. Other plans are approved administratively. After approval, technical and financial assistance can be provided for installation of works of improvement specified in the plans.

Project sponsors are provided assistance in installing planned land treatment measures when plans are approved. Surveys and investigations are made and detailed designs, specifications, and engineering cost estimates are prepared for construction of structural measures. Areas where sponsors need to obtain land rights, easements, and rights-of-way are delineated. Technical assistance is also furnished to landowners and operators to accelerated planning and application of needed conservation on their individual units. There are presently over 1600 projects in operation.

- 1. Enabling Legislation
- 2. Watershed Surveys and Planning
- 3. Installation of Watershed Plans
  - Active Projects
  - o Projects with Installation Complete
  - Search all PL566 Watersheds
- 4. Watershed Reinvention

NRCS Homepage | Conservation Programs

http://www.ftw.nrcs.usda.gov/pl566/pl566.html January 29, 1998

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#### Indiana Department of Environmental Management

Office of Water Management

Watershed Grants Program



Frank O'Bannon, Governor John Hamilton, Commissioner

#### Introduction

Protecting Indiana's water quality is important to all Hoosiers and a top priority for the Indiana Department of Environmental Management (IDEM). The Watershed Grants Program strives to protect and maintain Indiana's watersheds through grant funds for worthwhile projects. The 205j Water Quality Projects Grant and the 104(b)(3) Watershed Projects Grant are provided for within the Clean Water Act with funds derived from the United States Environmental Protection Agency (EPA). These funds have helped communities throughout Indiana improve the quality of their water while also reducing the effects of Nonpoint Source Pollution (NPS).

#### Water Quality Management Projects 205j (Formerly referred to as 604b)

Eligible, public organizations include, but are not limited to Municipal Governments, County Governments, Conservation Districts, and Irrigation and/or Drainage Districts. IDEM's priorities in selecting projects for funding are as follows:

- Compile, summarize and catalogue reports on water quality impacts from combined sewer, storm water runoff, and other nonpoint sources (NPS).
- Gather and map information on nonpoint water pollution sources other than agriculture, especially focusing on suburban areas.
- Develop recommendations for increasing the involvement of nonprofit environmental and civic organizations and the private sector in NPS planning and implementation activities.
- Develop plans for implementing watershed management in Northwest Indiana.
- In Northwest Indiana, plan for NPS controls and Best Management Plans (BMP), wetlands restoration, and methods for identifying other watershed problem areas.
- 6. All other proposals will be considered on a case by case basis.

All proposals must be received by the Watershed Grants Program by 5:00pm March 31. The anticipated start date for these projects will be October 1, 1998.

#### Watershed Projects Grant 104(b)(3)

Section 104(b)(3) of the Clean Water Act provides funding for the reduction, and elimination of pollution at the state level. The EPA's priorities in selecting projects for funding are as follows:

- Innovative demonstration projects which promote the development or implementation of State-wide watershed approaches in the National Pollutant Discharge Elimination System (NPDES).
- The development of storm water management plans by small municipalities which focus on the watershed approach to pollution prevention.
- 3. Projects which directly promote environmental results within watersheds.
- Projects involving the watershed approach to municipal separate sewer systems.
- 5. Projects that directly promote community based environmental protection.
- 6. Other projects will be reviewed on a case by case basis.

In most cases, 104(b)(3) projects will require a Quality Assurance Project Plan (QAPP). These plans must be reviewed for approval by the EPA before the project can begin. IDEM encourages applicants to consider Quality Assurance during the proposal stage so that if selected a QAPP may be written in a timely manner. For assistance in writing the QAPP, contact IDEM online at <a href="http://www.ai.org/idem">http://www.ai.org/idem</a>. In addition to the QAPP, a complete, detailed budget sheet will need to be provided. Budget Sheets should be submitted at the time of the proposal along with a schedule of tasks to be performed.

All proposals must be submitted to the Watershed Grants Program by 5:00pm on March 31.

#### Format For Proposals

All proposals should include the following...

- Name of applying entity, address, fax number (if available), phone number, and a contact name.
- A brief description of the problem that will be addressed in the project. Applicants should also give a brief history of the situation leading to why the proposal was submitted.
- 3. Applicants must provide a detailed description of the project. If sampling, or monitoring is to be performed during the project, applicants should be prepared to discuss how they will correct the pollution problem after the project has been completed in the event of negative findings.
- 4. The amount requested should be clearly stated. Under the 104(b)(3) grant a match is required that is equal to 5% of the total cost of the project.
- 5. A complete budget page must be provided that details expenditure categories such as equipment, travel, and laboratory expenses. An itemized analysis of wage rates, annual salaries and fringe benefits for all personnel who will contribute labor services to this project must be included. Categories listed as "Other Expenses" will not be accepted. If a match or in-kind contributions are to be made they should be listed on each budget category as a percentage of the expense.
- 6. A work plan must be provided that shows what tasks are to be performed

- and the dates when they will be completed. This should also include the due dates for the quarterly reports. October 1, 1998 should be used as the anticipated start date.
- Projects requesting funds under the 104(b)(3) grant should acknowledge their
  intent to provide a Quality Assurance Project Plan. In the event that the project
  is selected for funding by IDEM, the applicant will have thirty (30) days to
  provide a QAPP.

#### For more information, contact:

IDEM
Office of Water Management
Brett Wineinger
100 N. Senate Ave.
Indianapolis, IN 46206-6015
(317) 233-8282 Fax: (317)232-8406

### The IPALCO Golden Eagle Environmental Grant



Sponsored by IPALCO Enterprises, Inc., the parein company of Indianapolis Power & Light Company. Administered by the Indiana Park and Recreation Association (IPRA).

MISSION STATEMENT: We will provide financial grants to not-for-profit organizations and governmental units for projects which will preserve, protect, enhance or restore environmental and biological resources throughout the state of Indiana.

#### ELIGIBILITY:

Any unit of Indiana local or state government (including park boards, park and recreation departments, schools, state parks, etc.).

Any legally constituted not-for-profit agency or organization (as determined by the IRS or Indiana Secretary of State) and/or any of their chapters or sub-units within the state of Indiana.

#### NATURE AND SCOPE OF PROJECTS:

All projects must conform to and be in harmony with Indiana's native ecosystem, be biclogically sound and have a positive environmental impact.

Only environmental improvement or environmental restoration projects or projects which produce a tangible end product will be considered. Funding will not be considered for landscaping and beautification projects. A list of last year's Golden Eagle Grant recipients is attached.

All projects should provide appropriate access to the general public.

Projects may include the cost of a small educational component, such as a brochure or printed material.

Responsibility for completion of awarded projects rests with the applicant. Awarded projects not completed within the specified time line risk revocation of awarded funds.

Applicants (both successful and unsuccessful) may re-apply each year for funding. Each project year should be mutually exclusive. Funding granted for one year does not guarantee funding for a subsequent year.

All applications become the property of IPALCO Golden Eagle Grants.

#### FINANCIAL:

Grants will not exceed \$10,000 each.

Applicants are encouraged to combine IPALCO grant money with other monies/resources, if necessary.

Grant money should be used primarily for direct costs of the project. For example, grant money may not be used for administrative salaries.

Applicants are responsible for accuracy of budgets. Grant amounts will not be adjusted due to inaccurate bids and estimates.

Grants will be made directly to the recipient at a banquet to be held October 17, 1998.

Each award recipient must provide proof-of-liability insurance coverage and must name the Golden Eagle Awards, IPALCO and IPRA as additional insured in regard to all activity relating to their project.

#### REPORTING:

Grant recipients shall make interim reports as requested by the Golden Eagle Grant Advisory Panel (the Panel) and a final financial report at the completion of the project, with documentation and accounting of all grant monies.

#### JUDGING/EVALUATION OF APPLICANTS:

All applications will be evaluated using the attached judging criteria. A screening committee of the Panel will review all grant applications and submit funding recommendations to the full Panel.

The Panel will evaluate applications and determine grant winners for 1998. The Panel may seek additional information or documentation. All decisions of the Panel are final and independent of any review or approval by IPALCO and/or IPRA.

#### TIME LINE:

July 1, 1998: Grant application deadline.

September 8, 1998: Notification and public announcement of recipients.

October 17, 1998: Golden Eagle Grant Dinner, honoring recipients.

December 31, 1999: Projects completed and final reports due.

#### JUDGING CRITERIA

#### 1. Environmental Impact: 25 percent

Will the project make a significant positive impact on the environment? Is the project biologically sound? Does the project conform to the native ecosystem? Does the project address a particular problem, issue or concern within its locale?

#### 2. General Quality: 20 percent

Is the project well planned? What significance or impact will it have? Does it 'relate to the mission of the awards program? What is the anticipated longevity of the project? Who will be responsible for administering and maintaining the project when it is completed?

#### 3. Public Impact: 20 percent

- a. How valuable will the project be to the public and the community? How accessible will the project be to the public? Will the project be accessible to persons with disabilities?
- b. If not accessible to the public, what is the general value of the project to the public?

#### 4. Other Community Resources: 15 percent

Will the grant be matched or coupled with other money? Will other resources be used (i.e., materials donated, volunteer labor, etc.)? Does the project involve a collaborative effort or networking with other agencies or organizations? The grant should not replace tax dollars.

#### 5. Creativity and Transferability: 10 percent

Does the project demonstrate creative thinking and planning? Does the project reflect a new approach or unique idea in addressing environmental issues and concerns? Can the project be easily duplicated?

#### 6. Cost/Benefit Ratio: 10 percent

The amount of money requested compared to the potential benefits. The potential number of participants and visitors. The potential value to the community, park, neighborhood, school. The amount of administrative and overhead costs as a percent of the project.

#### APPLICATION FORMAT

- 1. All grant applications must be postmarked by July 1, 1998.
- 2. Send or deliver applications to:

Golden Eagle Grants

c/o Indiana Park and Recreation Association

101 Hurricane Street

Franklin, IN 46131

(Fax: 317-736-0894)

- The application may not exceed four (4) 8 1/2" x 11" pages. Appropriate supporting information (photos, letters, etc.) may not exceed five (5) additional pages. Longer applications will not be considered.
- Each application should include a separate budget page (in addition to the four-page application).
- 5. Please enclose a location map and site plan if applicable.
- 6. Please include two (2) copies of your completed application.

#### Applications should contain the following information:

Title of project

Name of submitting organization

Name address and telephone number of contact person

General overview and description of the project, including:

What will the project consist of?

Who and how many will be served?

What is the environmental benefit?

What is proposed organization, school or community involvement?

Location of the project.

A time-line, with suggested benchmarks for measuring success.

The criteria to measure success.

The budget page, including all costs for the project and an identification of the amount requested from the Golden Eagle Grant.

Itemize projected costs in the following categories. If no costs are projected, please indicate with a "0" or NA.

Line 1 Personal Services: Including wages and payroll.

Line 2 Contractual Services: Including design engineering fees, printing, postage, utilities, equipment rental, etc.

Line 3 Supplies and Materials: Including office supplies, tools, landscape materials, etc.

<u>Line 4 Capital Costs</u>: Including land purchase, equipment, buildings, improvements, etc.

Line 5 Administrative Costs: Identify type and amount of any proposed administrative costs and indicate percent of total.

Description of the sponsoring organization, including:

Project director. Experience in similar projects. Ability to complete the project. Planned maintenance. Documentation of not-for-profit status. (Include federal tax I.D.#.) Support letters. Identify land purchase permits, licenses, variances, etc., the project may require.

#### 1997 Golden Eagle Grant Winners

A wildlife habitat at Bean Blossom Bottoms In Monroe County, a project by the Sycamore Land Trust. The grant money will be used to acquire a 200-acre wetland in Monroe County to act as a buffer for an existing nature preserve and great blue heron rookery. Contact: Paul Spoelhof, 812-332-1104.

The Griffy Lake Nature Preserve North Shore revegetation project in Bicomington, a project by the Bicomington Parks and Recreation Department. Griffy Lake Nature Preserve is characterized by steep terrain and highly erodible soils. This project will minimize soil movement and reverse the ground cover losses which have been advancing up the slope for the past two decades. Contact: Steve Cotter, 812-349-3736.

An urban nature preserve for Indianapolis Public School #14, a project of Keep Indianapolis Beautiful. The grant will help pay for the creation of an outdoor nature preserve and habitat at the four-year-old school. Contact Linda Johnston, 317-264-7555.

A prairie restoration at Potato Creek State Park near North Liberty, a project by the Indiana Department of Natural Resources. This effort will restore native prairie to 15 acres of Potato Creek State Park to further enhance a functioning 60-acre wetland prairie ecosystem. Contact: Tim Cordell, 219-656-8186.

A habitat enhancement by the South Bend Audubon Society. This project is designed to increase the diversity of habitat on the 30-acre site at the South Bend Audubon Society Wildlife Sanctuary. It includes: The planting of five acres with native prairie grasses, the restoration of a stream bed and the creation of a one-acre wetland. Contact: Susan Duff, 616-663-2491.

A fen restoration at Sunset Hill Farm County Park at Valparaiso, a project by the Porter County Parks Foundation. Sunset Hill Farm County Park is a 235-acre setting that is the cornerstone of the very young park system started in 1984 for Porter County. The grant includes money for the stabilization of the embankments of the pond that feeds the spillway and the repair of the dam. Once the pond dam and spillway are repaired, a pathway to the area will be constructed for hikers. Contact: Hope T. Cook. 773-846-7300.

A streambank restoration and educational wetlands at Young's Creek Conservancy in Franklin, a project of Franklin Parks and Recreation. This project will include streambank stabilization, restoration of native species of trees and plants along the riparian corridor, a small marsh and a handicapped accessible boardwalk and observation deck along Franklin's first interpretive nature train. Contact: Suzanne Findley, 317-736-3689.

White Violet Nature Center at St. Mary of the Woods, a project by the Sisters of Providence. The grant will help fund phase one of a three-phase project to restore existing contiguous wetland, forest, lake and prairie land resources on an easily accessible portion of the 1,200-acre campus of St. Mary of the Woods College. Contact: Sister Ann Sullivan 812-535-3131 #525.

A Raptor flight cage and computer for the Wildlife Resqu Haus at Yorktown. For the last 35 years the Resqu Haus has provided a safe haven for Indiana's injured, sick, orphaned and abandoned wildlife. The grant will help play for a federally designed pen which will provide a stress-free environment and an area for Raptors to try their wings before release. Contact: Diana Shaffer, 317-759-9112.

An environmental education area at the Broad Ripple Dam in Indianapolis, a project of Indy Parks Greenways. The grant will be used to pay for native plants that are part of an effort to restore the area by promoting environmental education and a cleaner environment. Contact: Lori Mariacher. 317-327-7431.

A wetlands restoration at Eagle Creek Park in Indianapolis, a joint effort between the Eagle Creek Nature Center and New Augusta Academy. The proposed wetland restoration will provide the students of New Augusta Academy with the opportunity to understand the value of wetlands through actual plantings research and a sense of community involvement. Contact: Karen LaMere, 317-327-7148.

The reforesting of old house sites at the Big Walnut Nature Preserve in Putnam County, a project by The Nature Conservancy. The grant will restore forest to two old housing sites that are almost completely surrounded by forested lands. By preparing and reforesting these sites, the edge effect – which promotes nest predators and the proliferation of cowbirds – will be removed from a significant portion of the preserve. Contact John Shuey, 317-923-7547.

## XIV. ENVIRONMENTAL IMPACT

ASSESSMENT

LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

#### XIV. Environmental Impact Assessment

#### Indian Creek - Tippecanoe Country Club

#### Description of Project

The proposed project involves the excavation of two dry bottom detention areas at the outlet of drainage tiles in the headwater area of Indian Creek. Spoils from the excavation will be placed on existing cleared areas on the golf course. A drain and water control structure will be placed at the downstream end. The structure will detain water for a 10 year storm event and release it at a controlled rate over a 24 hour period through a 10 inch outlet.

#### Description of Project Site

The project site is forested with two drainages originating at tile outlets. The drainages are several inches deep and up to three feet wide with a substrate of organic matter over clay loam. At the time of inspection, no fish were present and invertebrates were limited to midges. Wetlands are not present except one small seep on the 3:1 slopes of the drainages. The outer edges of the project encroach into an existing golf course, therefore, the project cannot be moved out of the woods.

#### Potential Environmental Consequences

The most significant environmental consequences of this project are the loss of approximately 0.5 acres of mature mesic forest. Approximately 60 trees with diameters ranging from 6 - 25" may be removed during this project. The project will not replace or mitigate for the lost functions and values of this forest. Alternative plans which would accomplish the same purpose without loss of mesic woods were not acceptable to landowners. The two isolated basins were designed leaving one side of each basin undisturbed to avoid as many mature trees as possible. The benefits of the project including reduced peak flows, will help protect downstream habitat from further degradation. Edge effect will not be increased by the proposed activity, thereby only minimally affecting the wildlife capacity and species diversity of the woodlot.

#### Hanna B. Walker Ditch - Gilbert Property and Camp Crosley Property

#### Description of Project

The proposed project on the Gilbert property would excavate approximately 100 linear feet of stream bottom increasing the existing bottom width of 20 feet to approximately 35 feet. The depth would be increased from several inches to 4 - 5 feet. Spoils from this excavation would be placed into existing dredge spoil containment basins located within 100 feet of the project site.

The Camp Crosley location is currently 35 feet wide and would be increased to 45 feet wide. The depth would also be increased by 3 to 4 feet. Spoils will be spread over existing open ground and seeded or hauled off site.

#### Description of Project Site

Gilbert Property. The existing 20 foot bottom width of the ditch is an unvegetated shifting sand habitat. A fish survey upstream identified creek chubs and blacknose dace as the only species present during a mid-May sample. Invertebrates were limited to water striders, scuds,, and midge larvae. A wetland fringe of approximately three to five feet forms the edges of the stream's wetted perimeter. The ordinary high water mark is approximately 16 inches high. From the wetted perimeter the banks slope steeply upward due to past excavation activities. The spoils are up to three feet above the original floodplain grades and are dominated by stringing nettle and various trees.

<u>Camp Crosley Property</u>. The existing site is a maintained lawn over historically filled wetlands. The east embankment is 1.5 feet above normal water levels with sparse wetland vegetation on a near vertical slope. The water is several feet deep and was not inventoried for fish and invertebrates due to the late addition of this site. The opposite shoreline is a more natural transition from open water to cattail, then shrub covered wetland.

#### Potential Environmental Consequences

Gilbert Property. The proposed project will remove four trees and increase the open water area of the stream. The wetland edge will remain on the west bank and be replaced on the east bank with the same slopes. The additional pool created by the excavation will serve as cover and resting areas for the fish species found in the stream. The benefit of sediment reduction downstream of the project is significantly greater than the minor impacts that will occur.

<u>Camp Crosley Property</u>. Excavation of the sediment trap would occur from the east bank without changing the west bank. Project will begin at a safe distance from the bridge unless the bridge is removed. No environmental harm is expected by this project.

#### Hanna B. Walker Ditch - Richard Clay property

#### Description of Project

The proposed project will widen and deepen a 200 foot section of the Hanna B. Walker Ditch and excavate the adjacent open field area down to the level of a useful floodplain. Spoils will be placed in the remaining open field area avoiding the existing wetland. The floodplain will then be seeded and planted with a wide variety of native, non-weedy herbaceous vegetation adapted to this habitat.

#### Description of Project Site

The project area is an existing open ditch deepened to four feet below the floodplain by successive legal drain maintenance dredging project. The floodplain no longer functions to filter or store water for high flows. The ditch bottom is shifting sand with only creek chubs and blacknose dace present according to an electroshocking survey. Scuds were the dominant invertebrate present. Water depth was several inches deep and the low flow channel averaged about three feet wide. The banks of the ditch were about six feet high with the spoil ridge being more than two feet of this total. The area to be excavated is dominated by reed canary grass and tall nettle but is not wetland due to the lack of hydrology.

#### Potential Environmental Consequences

The proposed system is designed to trap sediments, store, and filter water. The system is designed to replace the natural pools, wetlands, and floodplains that were part of the original stream. The floodplain is no longer functioning as a natural filter and water storage area.

The existing fish and invertebrate community as well as the vegetative community within the project zone is made up of common species that will not be negatively affected by the proposed project. In fact, the project should benefit these species by providing additional habitat. Water quality will be improved with an estimated 50% reduction in sediment loads provided by this project alone.

#### Kuhn Ditch - White property

#### Description of Project

The proposed project would utilize an existing gravel pit for a sediment trap and nutrient filter. A high flow channel will be excavated through upland floodplain from Kuhn Ditch 165 feet to the gravel pit which would be deepened for an area of 40 feet by 200 feet along the east edge. Spoils would be placed on adjacent cropland. The remainder of the gravel pit would be sprayed with herbicide to eliminate coon tail and then revegetated with a more diverse array of native herbaceous emergents. The stream will flow out of the filter area and back into the original channel through an existing connection. No excavation will be required in this area to complete the connection.

#### Description of Project Site

The existing gravel pit is approximately two feet deep and surrounded by six foot high spoil ridges on the east and west side. The northwest corner is a wetland continuous with Kuhn Ditch, while the northeast corner is drained wetland dominated by reed canary grass and fescue. Trees line the existing gravel pit, but few if any would be removed by the proposed project. The pit is dominated by coon tail. Fish and invertebrates were not sampled in the gravel pit. Downstream of the project the stream was found to contain creek chubs, blacknose dace, Johnny darter, rainbow darter, bluegill and log perch.

#### Potential Environmental Consequences

The proposed project will reroute the floodwater of Kuhn Ditch through a nutrient filtering channel, sediment trap, and wetland. There are no environmentally sensitive plant communities or threatened or endangered species affected by this project. It is the opinion of the consultant that the environmental gains significantly outweigh the environmental losses for this project.

# XV. JUSTIFICATION FOR PROJECT LOCATIONS

LAKE TIPPECANOE FEASIBILITY STUDY KOSCIUSKO COUNTY, INDIANA

#### XV. Justification for Project Locations

#### Indian Creek

The Indian Creek detention structures, while likely to be the most expensive projects undertaken, are justified for the bacteria reduction and erosions prevention capabilities. Phosphorus and nitrogen reductions are an added attraction of the detention structures. The structures are designed to hold a ten year storm event for 24 hours with a slow release to the stream. It is expected that the structure will kill the majority of bacteria entering the stream from the existing drainage tile. The project will also result in a significant reduction of peak flows which should decrease the amount of erosion occurring along the stream banks. It is expected that a 50% reduction in total sediment yield from Indian Creek will result. The other locations were not feasible due to physical constraints of the property or lack of cooperation from a landowner. The proposed project cannot be built anywhere else and be both economically feasible and effective. Therefore, this site was selected as the only feasible alternative on Indian Creek.

#### Hanna B. Walker Ditch

The proposed projects are an attempt to reduce the sediment loads and trap nutrients in wetland vegetation and sediment traps. The traps will serve to slow down the flow of water and precipitate out the suspended solids as well as the phosphorus and nitrogen compounds bound to the sediments. Additional treatment will occur as flood waters flow over the newly created floodplain wetlands. The expected results are a 75% reduction in sediments, a 45% reduction in phosphorus and a 24% reduction in total nitrogen entering Lake Tippecanoe. The project locations were based on the need to meet the proposed physical requirements and landowner cooperation.

#### Kuhn Ditch

The Kuhn Ditch project location was chosen for two reasons. The site is physically amendable to controlling the suspected source of the identified contaminants and the landowner was willing to cooperate with the Foundation. No other site met both criteria. The project location on the subject parcel is the least disruptive to the existing agricultural use of the property and the most economical for construction. The net result of the project will be a 50 - 75% reduction in sediment loading, and a 24-45% reduction in nitrogen and phosphorus. Fecal coliforms will be reduced significantly, with greater efficiency at lower stream flows.

#### XVI.

#### **AGENCY**

#### **COORDINATION** /

#### **PERMIT APPLICATIONS**

LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

#### XVI. Agency Coordination and Permits

Attached is correspondence with the United States Corps of Engineers, Indiana Department of Environmental Management, Indiana Department of Natural Resources - Wildlife Management, U.S. Fish & Wildlife Service, and the Kosciusko County Surveyor. As stated in the correspondence, J.F. New & Associates met with these agencies on April 6 to review the Lake Tippecanoe Watershed Projects. All agencies were present except the United States Army Corps of Engineers and the agencies that were present supported the project. J.F. New & Associates received a telephone call from Keith Poole, IDNR, on June 23 giving verbal approval of the conceptual design.

As part of the project scope change on August 25, 1998, J.F. New and Associates, Inc. applied for all required permits on the Indian Creek detention structures and the Hanna B. Walker sediment trap. The permits are expected to be obtained in December 1998 or January 1999 and are attached in this section.





708 Roosevelt Road P.O. Box 243 Walkerton, IN 46574 Phone: 219-586-3400 FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement • Ecological Restoration 3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1986 Fax: 317-388-1986

June 17, 1998

Ms. Amy Babey
U.S. Army Corp of Engineers
Regulatory Functions North Branch
P.O. Box 59
Louisville, KY 40201-0059

RE: Lake Tippecanoe Watershed Projects

Dear Ms. Babey:

Enclosed are conceptual design plans for four projects proposed within the Lake Tippecanoe watershed within the jurisdiction of the Corps. The first project is on Kuhn Ditch and the next two projects are on the Hanna B. Walker Drain. Both of these ditches are located on the north side of the lake. Each of these projects involves the excavation of an approximately 0.5 acre, or less, sediment trap with an associated wetland filter. The wetland filter will be excavated out of the floodplain and will remain approximately one foot above the bottom elevation of the ditches. These structures are designed to decrease sediment and contaminant load to Lake Tippecanoe from the respective ditches. The fourth project is on Indian Creek, also on the north side of the lake, and involves only the excavation and herbaceous planting within the 75-foot easement of the legal drain. Less than 1/3 acre of "waters of the United States" will be excavated for each of the four separate projects.

We have reviewed the proposed projects with each of the affected landowners (Richard White on Kuhn Ditch, Richard Clay and Kevin Gilbert on Hanna B. Walker Ditch, and Tippecanoe Country Club on Indian Creek) and they have agreed to work with the Association. There is a general concurrence among the Lake Tippecanoe residents that these efforts to improve and protect the quality of Lake Tippecanoe are important and necessary.

We will be sending completed plans and specifications to the Corps and the Indiana Department of Environmental Management later this summer. At this time, we are presenting this information to seek concurrence from the Corps that these projects will not have adverse impacts on the environment. To secure final design and permitting funding from the Indiana Department of Natural Resources, we must submit to them evidence that landowners and regulatory agencies

Lake Tippecanoe Projects
J. F. New & Associates, Inc.
Page 2 of 2 ACOE

June 17, 1998

are supportive of the proposed projects. We are requesting that the Corps make a preliminary determination that each of these projects will qualify for Nationwide Permits as separate and distinct projects. If you have any questions, please don't hesitate to call. Thank you for your assistance.

Sincerely,

J. F. New & Associates, Inc.

John Richardson, My

John B. Richardson, Project Manager

enc.

c. Tippecanoe Environmental Lake and Watershed Foundation





708 Roosevelt Road P.O. Box 243 Walkerton, IN 46574 Phone: 219-586-3400 FAX: 219-586-3446

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3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982

one: 317-388-1982 Fax: 317-388-1986

June 17, 1998

Mr. Randy Jones
Office of Water Management
Indiana Department of Environmental Management
100 N. Senate Ave.
P.O. Box 6015
Indianapolis, IN 46206-6015

RE: Lake Tippecanoe Watershed Projects

Dear Mr. Jones:

Enclosed are conceptual design plans for four projects proposed within the Lake Tippecanoe watershed within the jurisdiction of the IDEM. Please recall our on-site meeting on April 6th to review these projects. The first project is on Kuhn Ditch and the next two projects are on the Hanna B. Walker Drain. Both of these ditches are located on the north side of the lake. Two of these projects involve the excavation of an approximately 0.5 acre, or less, sediment trap with an associated wetland filter. The wetland filters will be excavated out of the floodplain and will remain approximately one foot above the bottom elevation of the ditches. These structures are designed to decrease the sediment and contaminant load to Lake Tippecanoe from the respective ditches. Wetland impacts are limited to less than 1/3 acre for all projects combined.

The fourth project is on Indian Creek, also on the north side of the lake, and involves only the excavation and herbaceous planting or two constructed detention basins.

We have reviewed the proposed projects with each of the affected landowners (Richard White on Kuhn Ditch, Richard Clay and Kevin Gilbert on Hanna B. Walker Ditch, and Tippecanoe Country Club on Indian Creek) and they have agreed to work with the Association. There is a general concurrence among the Lake Tippecanoe residents that these efforts to improve and protect the quality of Lake Tippecanoe are important and necessary.

At this time, we are presenting this information to seek concurrence from IDEM that these projects will not have adverse impacts on water quality functions. Final plans will be submitted later this summer for permit approval. However, in order to secure final design and permitting

Lake Tippecanoe Projects J. F. New & Associates, Inc. Page 2 of 2 IDEM

June 17, 1998

funding from the Indiana Department of Natural Resources, we must submit to them evidence that landowners and regulatory agencies are supportive of the proposed projects. Please consider writing a short letter supporting these projects from a water quality perspective.

If you have any questions, please don't hesitate to call. Thank you for your assistance.

Sincerely,

J. F. New & Associates, Inc.

John Richardson, 1914 John B. Richardson, Project Manager

enc.

Tippecanoe Environmental Lake and Watershed Foundation c.





708 Roosevelt Road P.O. Box 243 Walkerton, IN 46574 Phone: 219-586-3400

one: 219-586-3400 FAX: 219-586-3446

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3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982 Fax: 317-388-1986

June 17, 1998

Mr. Keith Poole
IDNR Wildlife Management North
P. O. Box 344
Peru, IN 46970

RE: Lake Tippecanoe Watershed Projects

Dear Mr. Poole:

Enclosed are conceptual design plans for four projects proposed within the Lake Tippecanoe watershed within the jurisdiction of the IDEM. Please recall our on-site meeting on April 6th to review these projects. The first project is on Kuhn Ditch and the next two projects are on the Hanna B. Walker Drain. Both of these ditches are located on the north side of the lake. Each of these projects involves the excavation of an approximately 0.5 acre, or less, sediment trap. Two have an associated wetland filter. The wetland filter will be excavated out of the floodplain and will remain approximately one foot above the bottom elevation of the ditches. These structures are designed to decrease sediment and contaminant load to Lake Tippecanoe from the respective ditches.

The fourth project is on Indian Creek, also on the north side of the lake, and involves only the excavation and herbaceous planting within the 75-foot easement of the legal drain.

We have reviewed the proposed projects with each of the affected landowners (Richard White on Kuhn Ditch, Richard Clay and Kevin Gilbert on Hanna B. Walker Ditch, and the Tippecanoe Country Club on Indian Creek) and they have agreed to work with the Association. There is a general concurrence among the Lake Tippecanoe residents that these efforts to improve and protect the quality of Lake Tippecanoe are important and necessary.

At this time, we are presenting this information to seek concurrence from the regulatory agencies that these projects will not have adverse impacts on the environment. Your statement of general

Lake Tippecanoe Projects J. F. New & Associates, Inc. Page 2 of 2 IDNR

June 17, 1998

support for these projects will help us improve our chance of obtaining final design and permitting funds through the Lake and River Enhancement (LARE) Program.

If you have any questions, please don't hesitate to call. Thank you for your assistance.

Sincerely,

J. F. New & Associates, Inc.

John Lichardson, Project Manager

enc.

Tippecanoe Environmental Lake and Watershed Foundation c.





none: 219-586-3400 FAX: 219-586-3446

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June 17, 1998

3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982

Fax: 317-388-1982

Ms. Liz McCloskey U.S. Fish and Wildlife Service 120 S. Lake St., Suite 230 Warsaw, IN 46580

RE: Lake Tippecanoe Watershed Projects

Dear Ms. McCloskey:

Enclosed are conceptual design plans for four projects proposed within the Lake Tippecanoe watershed for your review. Please recall our on-site meeting on April 6th to review these projects. One project is on Kuhn Ditch, two projects are on the Hanna B. Walker Drain, and one project is on Indian Creek. All four projects are located on the north side of the lake.

The golf course project could not be moved as you requested for physical drainage reasons and due to opposition from the golf course. The other projects avoid all wetlands, keep tree clearing to an absolute minimum and will have negligible affects on the stream biota.

We have reviewed the proposed projects with each of the affected landowners (Richard White on Kuhn Ditch, Richard Clay and Kevin Gilbert on Hanna B. Walker Ditch, and Tippecanoe Country Club on Indian Creek) and they have agreed to work with the Association. There is a general concurrence among the Lake Tippecanoe residents that these efforts to improve and protect the quality of Lake Tippecanoe are important and necessary.

At this time, we are presenting this information to seek official comments from the regulatory agencies that these projects will not have adverse impacts on the environment. To secure final design and permitting funding from the Indiana Department of Natural Resources, we must submit to them evidence that landowners and regulatory agencies are supportive of the proposed projects. Your statement of general support will help us improve our chance of obtaining final design and permitting funds through the Lake and River Enhancement (LARE) Program. Please consider writing a short letter in support of the projects. If you have any questions, please don't hesitate to call. Thank you for your assistance.

Sincerely,

J. F. New & Associates, Inc.

Iphn Richardson, Ann John B. Richardson, Project Manager

enc.

Tippecanoe Environmental Lake and Watershed Foundation



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3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254

Phone: 317-388-1982 Fax: 317-388-1986

June 17, 1998

Mr. Dick Kemper Kosciusko County Surveyor 100 W. Center Warsaw, IN 46580

RE: Lake Tippecanoe Watershed Projects

Dear Mr. Kemper:

Enclosed are conceptual design plans for three projects proposed within the Lake Tippecanoe watershed within the jurisdiction of the Drainage Board. These projects involve only excavation and herbaceous planting within the 75 foot easement of the legal drains involved. The first project is on Kuhn Ditch and the second two projects are on the Hanna B. Walker Drain. Both of these ditches are located on the north side of the lake.

Each of these projects involves the excavation of a 0.5 acre, or less, sediment trap with an associated wetland filter. The wetland filter will be excavated out of the floodplain and will remain approximately one foot above the bottom elevation of the ditches. These structures should have no effect on water elevations.

We have reviewed the proposed projects with each of the affected landowners (Richard White on Kuhn Ditch and Richard Clay and Kevin Gilbert on Hanna B. Walker Ditch) and they have agreed to work with the Association. There is a general concurrence among the Lake Tippecanoe residents that these efforts to improve and protect the quality of Lake Tippecanoe are important and necessary.

At this time, we are presenting this information to seek concurrence from the Drainage Board that these projects will not have adverse impacts on the function of the ditches. Final plans will be submitted later this summer for your approval. However, in order to secure final design and permitting funding from the DNR, we must submit to them evidence that landowners and regulatory agencies are supportive of the proposed projects. Please consider a vote to lend your support. I will be in attendance at your June 25th meeting to answer any questions you may have. If you have any questions prior to the meeting, please don't hesitate to call.

Sincerely.

J. F. New & Associates, Inc.

John Richardson, Man John B. Richardson, Project Manager

enc.

C.

Tippecanoe Environmental Lake and Watershed Foundation





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21 January 1998

3955 Eagle Creek Parkway, Suite E Indianapolis, Indiana 46254 Phone: 317-388-1982

Fax: 317-388-1986

Brett Crump
Indiana Department of Environmental Management
Office of Water Management
P.O. Box 6015
Indianapolis, IN 46206-6015

Dear Mr. Crump:

J.F. New and Associates has been contracted to reduce the environmental stresses on Lake Tippecanoe by the Tippecanoe Environmental Lake and Watershed Foundation (TELWF) and the IDNR- Division of Soil Conservation through the Lake and River Enhancement Fund (LARE) program. Specifically, J.F. New and Associates is proposing to build nutrient filters, sediment traps or retention structures within three waterways. These structures will be associated with Indian Creek, Hannabe-Walker Drain and Kuhn Ditch in Kosciusko County.

The function of these structures are to improve water quality by retaining sediment, killing fecal coliform bacteria and filtering out phosphorus from the water column. At each project site, less than one-third of an acre of existing "waters" will be impacted. There are no wetland impacts.

I am organizing a site meeting for all interested regulatory personnel to provide comments on the projects prior to developing final designs. Final design cannot be initiated until we have received preliminary approval from IDEM, IDNR, USFWS, Corps of Engineers and the Drainage Board. A preliminary plan will be sent to you prior to this meeting in March. I will call next week to coordinate the site visit with you and other agency personnel.

Sincerely,

J.F. New and Associates, Inc.

John B. Richardson Project Manager

enc.

c. Holly LaSalle - TELWF, Tx2000 Committee Chair Michael Massone - IDNR, Division of Soil Conservation





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21 January 1998

3955 Eagle Creek Parkway, Suite E Indianapolis, Indiana 46254 Phone: 317-388-1986 Fax: 317-388-1986

Keith Poole Indiana Department of Natural Resources Division of Fish and Wildlife P.O. Box 344 Peru, IN 46970

Dear Mr. Poole:

J.F. New and Associates has been contracted to reduce the nutrient loading of Lake Tippecanoe by the Tippecanoe Environmental Lake and Watershed Foundation (TELWF) and the IDNR- Division of Soil Conservation through the Lake and River Enhancement Fund (LARE) program. Specifically, J.F. New and Associates is proposing to build nutrient filters and sediment traps on two drainage ditches within IDNR jurisdiction. These structures will be associated with Hannabe-Walker Drain and Kuhn Ditch in Kosciusko County. As part of the feasibility project the Division of Soil Conservation requires that we obtain advice and preliminary approval by all involved regulatory agencies prior to proceeding with final design. Once property owners and regulatory agencies have given preliminary approval, final design will proceed and permit applications will be submitted.

At this time, we are getting surveys of the project sites, which will be used to develop preliminary plans by March 1998. This letter is written in advance of those plans to provide you with enough lead time to schedule a site visit and provide me with feed back prior to public meetings being conducted in March and April. You will be provided with preliminary designs prior to the site visit. We are also seeking preliminary approval from IDEM, USFWS, Corps of Engineers, and the Drainage Board. I will call next week to coordinate a site visit with you and the other agency personnel. Your input is appreciated.

Sincerely,

J.F. New and Associates, Inc.

John B. Richardson Project Manager

enc.

 c. Holly LaSalle, Tx2000 Chair -TELWF Michael Massone - IDNR





FAX: 219-586-3446

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21 January 1998

Indianapolis, Indiana 46254 Phone: 317-388-1982 Fax: 317-388-1985

3955 Eagle Creek Parkway, Suite E

Elizabeth McCloskey United States Fish and Wildlife Service 120 South Lake Street, Suite 230 Warsaw, IN 46580

Dear Ms. McCloskey:

J.F. New and Associates has been contracted to reduce the environmental stresses on Lake Tippecanoe by the Tippecanoe Environmental Lake and Watershed Foundation (TELWF) and the IDNR- Division of Soil Conservation through the Lake and River Enhancement Fund (LARE) program. Specifically, J.F. New and Associates is proposing to build nutrient filters, sediment traps or retention structures within three waterways. These structures will be associated with Indian Creek, Hannabe-Walker Drain and Kuhn Ditch in Kosciusko County.

The function of these structures are to improve water quality by retaining sediment, killing fecal coliform bacteria and filtering out phosphorus from the water column. At each project site, less than one-third of an acre of existing "waters" will be impacted. There are no wetland impacts and fish and wildlife impacts are assumed to be minimal.

I am organizing a site meeting for all interested regulatory personnel to provide comments on the projects prior to developing final designs. Final design cannot be initiated until we have received preliminary approval from IDEM, IDNR, USFWS, Corps of Engineers and the Drainage Board. A preliminary plan will be sent to you prior to this meeting in March. I will call next week to coordinate the site visit with you and other agency personnel.

Sincerely.

J.F. New and Associates, Inc.

John B. Richardson Project Manager

enc.

c. Holly LaSalle - TELWF, Tx2000 Committee Chair Michael Massone - IDNR, Division of Soil Conservation





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21 January 1998

3955 Eagle Creek Parkway, Suite E Indianapolis, Indiana 46254 Phone: 317-388-1982

Fax: 317-388-1986

Mr. Matt Kuziensky U.S. Army Corps of Engineers Fort Benjamin Harrison P.O. Box 16502 Building T-18 Indianapolis, Indiana 46216

Dear Mr. Kuziensky:

J.F. New and Associates has been contracted to reduce nutrient loading on Lake Tippecanoe by the Tippecanoe Environmental Lake and Watershed Foundation (TELWF) and the IDNR-Division of Soil Conservation through the Lake and River Enhancement Fund (LARE) program. Specifically, J.F. New and Associates is proposing to build nutrient filters, sediment traps or retention structures within three waterways. These structures will be associated with Indian Creek, Hannabe-Walker Drain and Kuhn Ditch in Kosciusko County. The projects are all located within the headwaters of the respective drainages. At each project site, less than onethird of an acre of jurisdictional "waters" will be impacted. There are no wetland impacts.

I am organizing a site meeting for all interested regulatory personnel to provide comments on the projects prior to developing final designs. Final design cannot be initiated until we have received preliminary approval from IDEM, IDNR, USFWS, Corps of Engineers and the Drainage Board. A preliminary plan will be sent to you prior to this meeting in March. I will call next week to coordinate the site visit with you and other agency personnel.

Sincerely,

J.F. New and Associates, Inc.

ohn B. Richardson Project Manager

enc.

c. Holly LaSalle - TELWF, Tx2000 Committee Chair Michael Massone - IDNR, Division of Soil Conservation

# Drainage Board Meeting June 25, 1998

#### Present

Avis Gunter, Chairwoman
Donald Goon, Vice Chairman
Maurice McDaniel
Dorris Harrold
Eldon Watkins

Richard Kemper, Surveyor Mark Montel, Drainage Board Inspector Sue Gladieux, Drainage Board Secretary

#### Minutes

Donald Goon moved to approve the minutes of the May 28th, 1998 meeting. Dorris Harrold seconded the motion. All were in favor.

### Hanna B. Walker & Isaac Kuhn Drain

John Richardson, Watershed Ecologist, for J.F. New & Associates presented preliminary plans for proposed water retention basins on both drains. The purpose of the basins are to reduce the amount of silt, sediment and nutrients flowing into Tippecanoe Lake. 75% of the funding will be from the DNR and 25% of the funds are from the Tippecanoe Foundation (private donations). The Walker basins would be located on the Mildred Gilbert, Alice Long and Richard Clay properties. The basins will be placed within the 75 foot drainage right of way, but are not expected to hamper any future maintenance work on the drain. The basin on the Kuhn drain would be North of County Road 600 N in Section 10-33-7 on the White property. The landowner would like to utilize a gravel pit area on his property as an area to divert the water from the original route of the drain, use the gravel pit as a holding area, and then divert it back to the original channel. Richardson suggested vacating that portion of the Kuhn drain that would no longer be used after the diversion. Kemper was reluctant to vacate any drain portion at this time. He advised the Board that it would be important to not relinquish easement rights-of-way for the regulated drain, but felt that these basins are a win win situation and details on easement rights and future maintenance agreements should not be major problem in working out. Kemper also states that plans to date do not indicate water levels will be raised and therefore should not pose a problem for upstream or adjacent landowners. Richardson is requesting approval at this time of the concept contained in the preliminary plans. Kemper and Richardson will meet on site to gather information for the Board prior to Richardson submitting final plans for Board approval. Final plans are expected to be presented to the Board in August or September. The Board unanimously approved of the preliminary plans.

## Petition to take in tile arm near Mentone, (Swick Meredith watershed)

The petitioners are Max Holloway, Jim Romine and Creighton Brothers. The tile is located near County Road 900 West and State Road 25. Holloway paid to repair/replace the existing private tile. Kemper spoke to Mr. Holloway and the contractor (Jim Keirn) who did the work. Kemper submitted the following report/comments:



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live

Frank O'Bannon Governor

July 1, 1998

100 North Senate Avenue P.O. Box 6015 Indianapolis, Indiana 46206-6015 (317) 232-8603 (800) 451-6027 www.aiore/idem

John M. Hamilton

John Richardson JF New & Associates, Inc. 708 Roosevelt Road Walkerton, IN 46574

Dear Mr. Richardson:

Re: Tippecanoe Lake Watershed Project Section 401 Water Quality Certification

IDEM has received the conceptual plans for the construction of sediment control structures, detention basins and wetland filter systems in the Tippecanoe Lake watershed for the purpose of improving water quality in the lake. Four projects are proposed.

Impacts to jurisdictional wetlands have been minimized to less than 1/3 acre for all projects combined. The construction of the wetland filter systems should adequately replace the water quality functions of the wetland areas to be impacted.

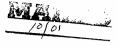
Based on the information submitted in the June 17, 1998 correspondence and the field inspection conducted on April 6, 1998, it is the opinion of IDEM that the proposed projects will not result in the degradation of Indiana's water quality. IDEM anticipates the issuance of Section 401 Water Quality Certification for the proposed project pending the submittal and review of a complete application.

Please contact me at 317 233-2473 if you have additional questions.

Sincerely,

Randy Jones Project Manager





none: 219-586-3400 FAX: 219-586-3446

Fax: 317-388-1986

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement • Ecological Restoration 3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982

September 25, 1998

Ms. Amy Babey U.S. Army Corps of Engineers PO Box 59 Louisville, KY 40201-0059

RE: Request for NWP 26, COE file 199801139-asb, Indian Creek, Kosciusko County, Indiana

Dear Ms. Babey:

J.F. New & Associates is under contract with the Tippecanoe Environmental Lake and Watershed Foundation (TELWF), 67 EMS T49A Lane, Syracuse, Indiana 46567 to complete a feasibility study which includes permit applications to install two detention structures at the headwaters of Indian Creek. The purpose of these detention structures is to store storm water from an existing golf course drainage system to reduce velocities in Indian Creek, thereby reducing the severe erosion and sedimentation occurring at the outlet on Tippecanoe Lake. The site is located in Section 6 of Township 33 North, Range 7 East in Kosciusko County, Indiana (Figure 1). The owner of the property is the Tippecanoe Country Club which will be granting an easement to TELWF to construct and maintain the project.

The detention structures will be located at the top of the drainage way. The detention structures will require two dams that will impact less than 0.2 acres of jurisdictional "waters of the U.S.". No wetlands will be directly or indirectly impacted by this construction.

TELWF is the official applicant and will be permit holder and responsible party. J.F. New is the current acting agent on behalf of TELWF. We are requesting verification that this project qualifies for a Nationwide 26 Permit. Section 401 Water Quality Certification from the Indiana Department of Environmental Management (IDEM) has been requested (copy enclosed). Please don't hesitate to call if you have any questions. Thank you for your consideration.

Sincerely,

J.F. New & Associates, Inc.

John B. Richardson Project Manager

Enclosures

cc: Holly LaSalle, TELWF

JFNA File # 95-08-2201





Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement • Ecological Restoration

25 September 1998

3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982 Fax: 317-388-1986

Randy Jones Indiana Department of Environmental Management Office of Water Management P.O. Box 6015 Indianapolis, IN 46206-6015

RE: 401 request, Indian Creek, Kosciusko County, Indiana

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Thank you,

J.F. New and Associates, Inc.

John B. Richardson Project Manager

enc.

c. Holly LaSalle - TELWF V
Amy Babey - Corps of Engineers V



708 Roosevelt Road P.O. Box 243 Walkerton, IN 46574

Phone: 219-586-3400 FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement • Ecological Restoration 22 October 1998

3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1986 Fax: 317-388-1986

Richard Kemper Kosciusko County Drainage Board 100 West Center Street Warsaw, IN 16580

RE: Drainage Board Permit - Lake Tippecanoe Enhancement Project, Hanna B. Walker Drain

Dear Mr. Kemper:

Please reference the June Drainage Board meeting where I presented several projects that we are designing within the jurisdiction of the Kosciusko Drainage Board. This is an official request for a Drainage Board Permit or permission to install a sediment trap on Hanna B. Walker Drain. Permits have also been requested from the IDNR, Corps of Engineers and IDEM for this project.

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The sediment trap will be constructed from the east side of the ditch with no disturbance to the west side (Figures 2-4). The sediment trap will have top of bank dimensions of 80 feet by 45 feet and be armored on the upstream end by riprap and east edge by PVC sheet piling. Spoils will be incorporated into the upland landscape of the existing property or hauled off site at the owners discretion. This project will be constructed and maintained on an as needed basis by TELWF at no expense to the Drainage Board.

Thank you for your attention to this project. If there are any questions please call.

Sincerely,

J.F. New and Associates, Inc.

/John B. Richardson Project Manager

enc.

Holly LaSalle
 Richard Armstrong



FAX: 219-586-3446

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3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254

Phone: 317-388-1982 Fax: 317-388-1986

22 October 1998

Ms. Amy Babey U.S. Army Corps of Engineers PO Box 59 Louisville, KY 40201-0059

RE:

Request for NWP 26, COE file 199801139-asb, Hanna B. Walker Drain, Kosciusko County, Indiana

Dear Ms. Babey:

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Sincerely.

J.F. New and Associates, Inc.

John B. Richardson Project Manager

enc.

c. Holly LaSalle - TELWF



FAX: 219-586-3446

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22 October 1998

3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982 Fax: 317-388-1986

Randy Jones IDEM-Office of Water Management P.O. Box 6015 Indianapolis, IN 46206-6015

RE: 401 request, Hanna B. Walker Drain, Kosciusko County, Indiana

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J.F. New and Associates, Inc.

John B. Richardson Project Manager

enc.

c. Holly LaSalle - TELWF Amy Babey - Corps of Engineers



#### DEPARTMENT OF THE ARMY

U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS P.O. BOX 59 LOUISVILLE, KENTUCKY 40201-0059 FAX: (502) 582-5072

September 1, 1998

Operations Division Regulatory Branch (North) ID No. 199801139-asb

Mr. John B. Richardson J. F. New and Associates, Inc. P.O. Box 243 Walkerton, Indiana 46574

Dear Mr. Richardson:

This is in regard to your letter dated June 17, 1998, requesting concurrence that the 4 watershed projects around Lake Tippecanoe in Kosciusko County, Indiana, would individually qualify for a nationwide general permit considering that each impact would be less than 0.5 acre. We have reviewed your application under Section 404 of the Clean Water Act (CWA) to determine the need for a Department of the Army permit.

Based on our review of the submitted data, we concur that the project would likely qualify for a nationwide general permit. However, additional information will be required before we can make a final determination for a permit. You are reminded that all drawings submitted with your application must be on 8½- x 11-inch paper and be of reproducible quality.

Your application has been assigned ID No. 199801139-asb. Please reference this number on all correspondence pertaining to this project. Ms. Amy S. Babey will be processing your request. If you have any questions regarding the requested information, please contact this office by writing to the above address, ATTN: CELRL-OP-FN or by calling Ms. Babey at (502) 582-5607.

Sincerely,

Doug Shelton An Chief, North Section

Regulatory Branch





Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement • Ecological Restoration

3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1986 Fax: 317-388-1986

September 25, 1998

Ms. Amy Babey U.S. Army Corps of Engineers PO Box 59 Louisville, KY 40201-0059

RE: Request for NWP 26, COE file 199801139-asb, Indian Creek, Kosciusko County, Indiana

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J.F. New & Associates, Inc.

John B. Richardson Project Manager

Enclosures

cc: Holly LaSalle, TELWF JFNA File # 95-08-2201





Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement • Ecological Restoration

25 September 1998

3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982 Fax: 317-388-1986

Randy Jones Indiana Department of Environmental Management Office of Water Management P.O. Box 6015 Indianapolis, IN 46206-6015

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Thank you.

J.F. New and Associates, Inc.

John B. Richardson Project Manager

enc.

c. Holly LaSalle - TELWF V
Amy Babey - Corps of Engineers V

# Application for Water Quality Certification

Address all applications or questions to:

Indiana Department of Environmental Management Section 401 Water Quality Certification Program 100 North Senate Avenue, PO Box 6015, Indianapolis, Indiana 46206-6015 1-800-451-6027 or 317-232-8683

# PLEASE PULL OUT APPLICATION FROM PACKET

Failure to provide the information requested in this application may result in a delay of processing or denial of your application.

	For office use only	
Project Manager:		
Date Received:		
IDEM I.D. Number:		
County:		

1. APPLICANT INFORMATION					
Name of Applicant			Mailing Address (Street, PO Box or Rural Route)		
Tippecanoe Country Club c/o Blaire Clark		o Blaire Clark	7245 North Kolarama Road		
City	State	Zip			
Leesburg	IN	46358			
Daytime Telephone Number			Fax Number		
219-453-4441					

2. AGENT INFORMATION					
Name of Agent			Mailing Address (Street, PO Box or Rural Route)		
Tippecanoe Env Foundation	vironmental Lake	& Watershed	Attn: Holly LaSaile 67 EMS T49A Lane		
City	State	Zip			
Syracuse	IN	46567			
Daytime Telephone Number			Fax Number		
1-219-843-2185					

3. <b>PROJECT INFORMATION</b>			
County project is located in	Nearest Town		
Kosciusko	Syracuse		
Project Name or Title (if applicable)	Project Street Address		
Indian Creek Detention Structure	7245 North Kolarama Road		
Type of aquatic resource to be impacted	Name of waterbody		
intermittent water way	Indiana Creek		
Linear feet of bank/shoreline impact (if applicable)	Acreage of wetland proposed to be impacted (if applicable)		
400'	N/A		
Acreage of wetlands on site	Cowardin Classification (if known)		
None			

# 4. Describe proposed project:

4. Describe proposed project:
Construction of two detention structures at the top of the drainageway. Two dames each will impact less than 0.2 acres of "waters of the U.S." There are no associated wetlands that will be impacted with the construction of the two detention structures.
5. Purpose of project:
To detain stormwater before entering the main channel of Indian Creek.
6. Date project will begin if permit is issued: 1/99
Anticipated completion date: 3/99
<ol> <li>Describe possible alternatives to the proposed project to avoid or minimize impacts to the aquatic resource. Also describe where and how you plan on putting and containing the dredged/excavated material (if any) to prevent reentry into the aquatic resource.</li> </ol>
Moving the detention structure downstream in Nature Conservancy's mature woodland or moving downstream into the golf course. The dredges soil will be placed in the adjacent golf course.
and a second second with see placed in the adjacent goth course.
Do you expect to dredge any sediments that you know, or have reason to believe, are contaminated with pollutants?  Yes X No Please identify the pollutants that may be present in the sediment.
9. Are you aware of any unique resources (e.g., mussels) or threatened or endangered (state or federal) species present in the aquatic resource you are proposed to impact?  Yes X No Please identify.
10. If fill is to be placed, describe the type, composition and quantity:
Approximately 5 cubic yards of fill at each dam consisting of clean earthen material.

11.	of E	ngineers	olied for an Army Corps of Engineers Section 404 permit? X yes No. If yes, please supply the Corps ID Number, the Corps of Engineers District, the project manager, and a copy of any correspondence with the Corps contact the Army Corps of Engineers regarding the possible need for a permit application. (See instructions 11.)
		9801139	<i>,</i>
12.	Have this	e you app project?	lied for, received, or been denied any other federal, state, or local permits, variances, licenses, or certifications for Please give the permit name, agency from which it was obtained, permit number, and date of issuance or denial.  No
13.	Plea	ise attac	n the following information:
	X	Α.	List of adjacent landowners and persons who may be adversely affected by the project (Attachment A).
	<u>X</u>	B. -	A standard size drawing (8.5" $\times$ 11") of the proposed activity showing an overhead view and cross section that clearly illustrate the scale, north arrow, wetland delineation (and data sheets if required by the Corps see instructions), erosion control devices, existing and proposed structures and their dimensions, water depths and bottom configurations (if applicable), existing and proposed waterway configurations and elevations, dredge cuts and fills, and ordinary high water mark.
	X	C.	Photographs of the proposed project site; label the photos and identify the location(s) where the photographs were taken on the drawing.
		D.	If proposed, a mitigation plan to minimize impacts to water quality including the restoration or creation of wetlands to replace the wetlands that will be lost as a result of the proposed project.
	X	. Е.	Directions to the project location and a copy of a vicinity map and/or a copy of the portion of the U.S.G.S. 7.5 minute topographic map clearly showing the project location.
	. :	1949	
acc awa IDE proj grai	urate. urate. are tha M's g per au	Information  I certify at there a pranting or attherization of other properties.	Water Quality Certification to authorize the activities described in this application. I certify that I am familiar in contained in this application and to the best of my knowledge and belief, such information is true and that I have the authority to undertake and will undertake the activities as described in this application. I am repenalties for submitting false information. I understand that any changes in project design subsequent to f WQC are not covered by the WQC, and I may be subject to civil and criminal penalties for proceeding with m. I agree to allow representatives of the IDEM to enter and inspect the project site. I understand that the ermits by local, state, or federal agencies does not release me from the requirement of obtaining the WQC efore commencing the project.
Appl	icant'	's Signat	ure: Welly Sa Salle, for TELWF Date: 9/05/48

### ATTACHMENT A

Please be sure to include this attachment with your application. Failure to include it may result in a delay of processing or denial of your application.

Adjacent landowners and other persons (or entities) who may be affected by your project need to be notified of your project. Please list the names and addresses of landowners adjacent to the property on which your project is located and the names and addresses of other persons (or entities) potentially affected by your project. Attach additional sheets if needed.

Name:	Daniel & Anita Gillespie
Address:	7782 North 400 East, Leesburg, IN 46538
Name:	Fons & Linda Speidel
Address:	67773 County Road 33, Millersburg, IN 46543
Name:	Larry Mock
Address:	6785 East Eli Lilly Road, Syracuse, IN 46567
Name:	Patricia Oppenheim
Address:	60 EMS T37 Lane, Leesburg, IN 46538
Name:	Arthur & Jewel Marose
Address:	96 EMS T37 Lane, Milford, IN 46542
Name:	Rebecca Anne Hawks
Address:	7786 Jamestown South Drive, Fishers, IN 46038
Name:	
Address:	
lease provid rea.	e the names and telephone numbers of the two largest newspapers of general circulation in the project

Newspaper name:	Warsaw Times Union
Telephone number:	219-267-3111
Newspaper name:	Milford Mail Journal
Telephone number:	219-457-3666





JFNA# 95-08-2201

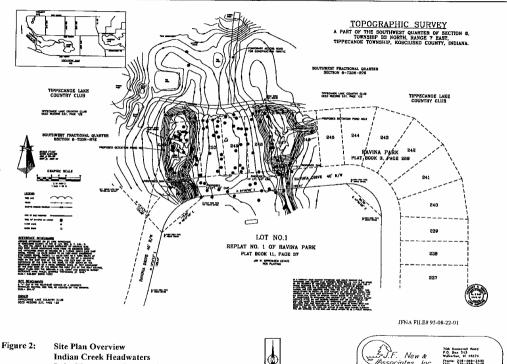
Scale: 1" = 2,000"

Figure 1: Location Map
Two Detention Basins
Lake Tippecanoe Country Club
Kosciusko County, Indiana



708 Roosevelt Road P.O. Bax 243 Walkerton, IN 48574 Phone: 219-588-3400 FAX: 219-588-3448

Permitting • Delineations • Mitigation Design • Biological Inventories Wetland and Prairie Nursery • Lake and Stream Enhancement Natural Systems for Wastewater Treatment



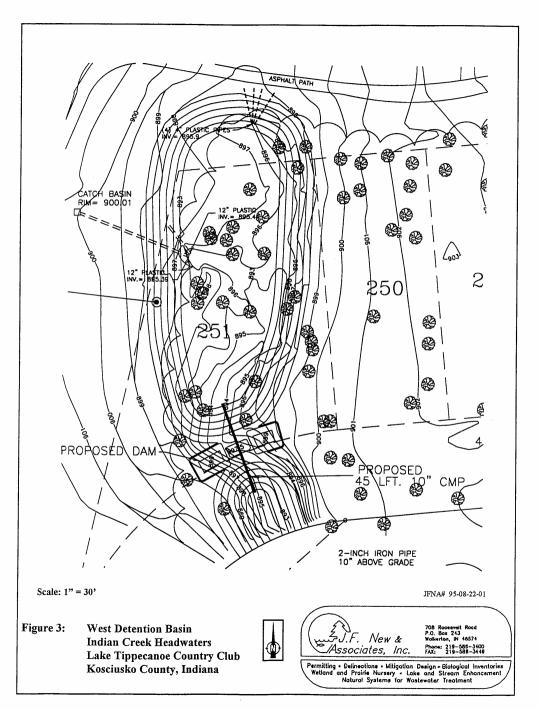
Lake Tippecanoe Country Club Kosciusko County, Indiana



Associates. Inc.

Priorie: 219-540-3400 FAX: 219-588-3446

Permitting - Delineations - Mitigation Deelign - Biological Inventories
Wational and Prokie Nursery - Lake and Stream Enhancement
Natural Systems for Woodewaler Treatment



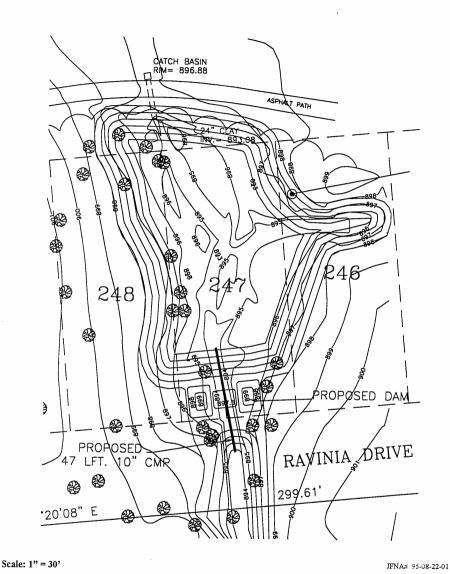


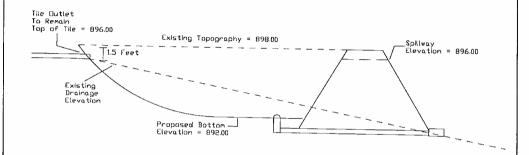
Figure 4: East Detention Basin
Indian Creek Headwaters
Lake Tippecanoe Country Club
Kosciusko County, Indiana

J.F. New & Associates, Inc.

708 Rooseveit Rood P.O. Box 243 Waterton, IN 48574 Phone: 219-586-3400 FAX: 219-588-344

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### TYPICAL CROSS SECTION BASIN #1 AND #2



JFNA FILE# 95-08-2201

Figure 5: Cross Section
Two Detention Basins
Lake Tippecanoe Country Club
Kosciusko County,, Indiana

Not to Scale





FAX: 219-586-3446

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3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254

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22 October 1998

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J.F. New and Associates, Inc.

John B. Richardson Project Manager

enc.

c. Holly LaSalle - TELWF



FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement • Ecological Restoration 22 October 1998

3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982

Fax: 317-388-1986

Richard Kemper Kosciusko County Drainage Board 100 West Center Street Warsaw, IN 16580

RE: Drainage Board Permit - Lake Tippecanoe Enhancement Project, Hanna B. Walker Drain

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Thank you for your attention to this project. If there are any questions please call.

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John B. Richardson Project Manager

enc.

c. Holly LaSalle Richard Armstrong

Mail To:

Division of Water

Department of Natural Resources

402 West Washington Street, Room W264 Indianapolis, Indiana 46204-2748 Telephone Number: (317) 233-5635

Fax Number: (317) 233-4579

# PERMIT APPLICATION

Approved by the State Board of Accounts(Pending)

AGENCY USE ONLY							
Application #	Section Coordinat	tes	UTM North	UTM East			
30 Day Notice	Fee Submitted \$	Check #	Receipt #_				
□ IC 14-26-2 Lake Preserva □ IC 14-26-5 Lowering of the	□ IC 14-26-5 Lowering of the Ten Acre Lake Act □ IC 14-29-3 Sand and Gravel Permits Act  ▼ IC 14-28-1 Flood Control Act □ IC 14-29-4 Construction of Channels Act						
1.	APPLICAN	T INFORMATION					
Name of Contact Person <u>Holly La</u> Mailing Address <u>67 EMS T49A La</u>	Name of Applicant <u>Tippecanoe Environmental Lake &amp; Watershed Foundation</u> Name of Contact Person <u>Holly LaSalle</u> Mailing Address <u>67 EMS T49A Lane</u> (Street, P.O. Box or Rural Route)						
,		Indiana State Fax Number <u>(</u>		<u>46567</u> Zip Code			
2.	^ OF NIT INIT	COLLATION					
	<del></del>	FORMATION					
Name of Authorized Agent <u>J.F. Ne</u>		_	Person John	Richardson			
Mailing Address <u>708 Roosevelt Ro</u> (Street, P.O. B	oad fox or Rural Route)						
Walkerton		Indiana		46574			
City	2 \586.2400	State	40 \ 50C 04	Zip Code			
	Daytime Telephone Number (219 )586-3400 Fax Number (219 ) 586-3446						
3. PROPERTY OWNER INFORMATION							
Name of Property Owner YMCA Camp Crosley Name of Contact Person Richard Armstrong							
Mailing Address 165 EMS T2 Lane							
(Street, P.O. B	ox or Rural Route)						
		Indiana		46555			
City		State		Zip Code			
Daytime Telephone Number (		_ Fax Number <u>(</u> Purchaser X Le	esee	Other			

4. AFFIRMATION OF PERSONAL SERVIC		-1 400 4
	U.S. POSTAL SERVICE CERTIFICATE OF MAILING MAY BE USED FOR DOMESTIC AND INTERNATIONAL MAIL, DOES NOT PROVIDE FOR INSURANCE PROSEMANTED.	Affix fee here in stamp or meter postage and
I have provided public notice to the listed	THE TOT MODIFIED THAT IER	post mark, Inquire of
and 310 IAC 0.6 through the method ind	Rec J.F. New & Associates, Inc.	Postmaster for currentee.
(Check the appropriate Box - Please ma	c/o John Richardson	
, and appropriate the second s	— 708 Roosevelt Road —	
	— PO Box 243	,
YMCA Camp Crosley c/o Richard Armstro	Walkerton, IN 46574	
Property Owner (if not applicant or adjacent		Þ
405 5140 70 /	One piece of ordinant well and	
165 EMS T2 Lane Address	U.S. POSTAL SERVICE CERTIFICATE OF MAILING	Affix fee here in stamps or meter postage and
Address	MAY BE USED FOR DOMESTIC AND INTERNATIONAL MAIL, DOES NOT PROVIDE FOR INSURANCE—POSTMASTER	post mark. Inquire of
North Webster IN	Receiver J.F. New & Associates, Inc.	Postmaster for current fee.
City State 2	c/o John Richardson	,
Oity Clate 1	1 2	
	—— 708 Roosevelt Road	1
	PO Box 243	
	Walkerton, IN 46574	
William & Susan Gerrity	One piece of ordinary mail addressed to:	!
Adjacent Landowner:	The state of the s	<u>'</u>
	William and Susan Gerrity	H <sup>;</sup>
5361 E 650 North	U.S. POSTAL SERVICE CERTIFICATE OF MAILING	Affix fee here in stamps or meter postage and
Address	U.S. POSTAL SERVICE CERTIFICATE OF IMAILING MAY BE USED FOR DOMESTIC AND INTERNATIONAL MAIL, DOES NOT PROVIDE FOR INSURANCE—POSTMASTER	post mark. Inquire of
Company	PROVIDE FOR INSURANCE - POSTMASTER	Postmaster for current fee.
Syracuse IN State 2	Receiv J.F. New & Associates, Inc.	iee.
City State 2	c/o John Richardson	
	708 Roosevelt Road	
	PO Box 243	
	Walkerton, IN 46574	
Kelly & Esme Phillips		1
Adjacent Landowner:	One piece of ordinary mail addressed to:	,
	Kelly and Esme Phillins	l
PO Box 1387	U.S. POSTAL SERVICE CERTIFICATE OF MAILING	Affix fee here in stamps or meter postage and
Address	U.S. POSTAL SERVICE CERTIFICATE UF INTAILING  MAY BE USED FOR DOMESTIC AND INTERNATIONAL MAIL, DOES NOT PROVIDE FOR INSURANCE – POSTMASTER	post mark. Inquire of
Margay	PROVIDE FOR INSURANCE - POSTMASTER	Postmaster for current fee.
Warsaw IN 4 City State 2	Receiv J.F. New & Associates, Inc.	
City State 2	c/o John Richardson	
	708 Roosevelt Road	
	PO Box 243	
	Walkerton, IN 46574	1
Ann V. Brennaman		
Adjacent Landowner:	One piece of ordinary mail addressed to:	<u>.</u>
	Ann V. Brennaman	1
5521 E 650 North	= E21 E 650 North	
Address	U.S. POSTAL SERVICE CERTIFICATE OF MALLING	E.C.
		Affix fee here in stamps
Syracuse IN 4	PROVIDE FOR INSURANCE -POSTMASTER	or meter postage and post mark. Inquire of
City State Z	Rec J.F. New & Associates, Inc.	Postmaster for current fee.
	c/o John Richardson	166.
	708 Roosevelt Road	
	— PO Box 243	
Alice Long	Walkerton, IN 46574.	
Adjacent Landowner:	000 of the 1001, 110 40074.	,
,	One piece of ordinary mail addressed to:	
049 East 650 North	_ Alice Long	Harry
Address	6049 East 650 North	
	- Syracuse, IN 46567	
Syracuse IN 4	866/	
City State		
,	1 69 1	

PS Form 3817, Mar. 1989

Michael & Patricia Shirl Adjacent Landowner:  5516 Four Mile Road Address  Kokomo City	IN State	
James & Kathy Stefana Adjacent Landowner:  1616 Alber St. Address  Wabash City	IN State	<u>46</u> 
Pamala and Kevin Gilbo Adjacent Landowner:	ert	
5413 E 650 North Address		
Syracuse City	IN State	<u>46</u> 

U.S. POSTAL SERVICE CENTIFICATE OF IVIAILING	or meter postage and
MAY BE USED FOR DOMESTIC AND INTERNATIONAL MAIL, DOES NOT PROVIDE FOR INSURANCE—POSTMASTER	post mark. Inquire of Postmaster for current
Receiv J.F. New & Associates, Inc.	fee.
c/o John Richardson	
— 708 Roosevelt Road –	
PO Box 243	
U.S. POSTAL SERVICE CERTIFICATE OF MAILING  MAY BE USED FOR DOMESTIC AND INTERNATIONAL MAIL, DOES NOT PROVIDE FOR INSURANCE—POSTMASTER  F. J.F. New & Associates, Inc.  c/o John Richardson  - 708 Roosevelt Road  PO Box 243	Affix fee here in stamp: or meter postage and post mark. Inquire o Postmaster for curren fee.
Walkerton, IN 46574  One piece of ordinary mail addressed to:	
U.S. POSTAL SERVICE CERTIFICATE OF MAILING  MAY BE USED FOR DOMESTIC AND INTERNATIONAL MAIL, DOES NOT  PROVIDE FOR INSURANCE—POSTMASTER  Re. J.F. New & Associates, Inc.  c/o John Richardson  708 Roosevelt Road  PO Box 243  Walkerton, IN 46574	Affix fee here in stamp or meter postage ar post mark. Inquire: Postmaster for currer fee.
One piece of ordinary mail addressed to:  Kevin and Pamala Gilbert  5413 E 650 North  Syracuse, IN 46560  PS Form 3817, Mar. 1989  GPO: 1993 0 - 151-051	***************************************

fix fee here in stamps meter postage and st mark. Inquire of stmaster for current

ffix fee here in stamps r meter postage and ost mark. Inquire of ostmaster for current e.

5. PROJECT DESCRIPTION				
5.1 Description Narrative: (See Application Information Packet)				
Construction of a sediment trap at the outlet to Lake Tippecanoe from the Hanna B. Walker Drain. The				
sediment trap will be excavated out of the floodplain to approximately 4 feet below the existing bottom elevation				
of the ditch. There are no associated wetlands that will be impacted with the construction of the sediment trap.				
Dredged sediment material will be moved and placed in existing drainage spoil basins outside of the floodway.				
6. PROJECT LOCATION				
6-1 Location Narrative: (See Application Information Packet)				
Stream/Lake Name				
Hanna B. Walker Drain				
6-2 Driving Directions: (See Application Information Packet)				
US 30 to SR 13 north to 650 North Road. West on 650 North to EMS T49 Lane. South on EMS T49 Lane. When the road goes west and turns to go south again, the site is in the north corner.				
6-3 Special Information: (See Application Information Packet)				
6-4 Project Location Map: (See Application Information Packet) Attached				
6-5 Project Site Map: (See Application Information Packet) Attached				

# 7. DISTURBED AREA DRAWING

7.1 Drawing Requirements: (See Application Information Packet)

8-3 Photo Documentation: (See Application Information Packet)

8. **PROJECT PHOTOGRAPHS** 8-1 Images: (See Application Information Packet) 8-2 Photo Orientation Map: (See Application Information Packet)

9. RELATED PROJECT INFORMATION		
Department of Natural Resources		
Administrative Cause #	Related Application(s) #	
Early Coordination #	Utility Exemption #	
Recommendation #	Violation #	
Department of Environmental Manager	nent	
Section 401 # Applied for		
Corps of Engineers		
Public Notice #	Section 10 Application #	
Section 404 Application #		

#### 10. STATEMENT OF AFFIRMATION

I hereby swear or affirm, under the penalties for perjury, that the information submitted herewith is to the best of my knowledge and belief, true, accurate and complete, and that the property owner (s), and adjoining landowners have been notified of the activity. I further certify that I possess the authority to undertake the proposed or completed activities. I hereby grant to the Department of Natural Resources, the right to enter the above-described location to inspect the proposed or completed work.

la Salle, for TELWF Signature of Applicant or Authorized Agent (REQUIRED)

11.

#### REGULATORY FEES

- 11-1 Regulatory Fees Submitted: (See Application Information Packet)
- 11-3 Payment Method: (See Application Information Packet)

#### REQUIREMENT FOR ADDITIONAL INFORMATION AND PERMITS

Application made to and approval granted by the Department of Natural Resources does not in any way relieve the applicant of the necessity of securing easements or other property rights, permits and approvals from affected property owners and other local, state, and federal agencies.



October 6, 1998

FIELD(Property Owner) FIELD(Address)

Dear FIELD(Property Owner):

On behalf of our client, Tippecanoe Environmental Lake and Watershed Foundation (TELWF) we are providing you with the enclosed Public Notice regarding the submission of a Construction in the Floodway permit application. The Indiana Department of Natural Resources (IDNR) has jurisdiction over construction in designated floodways, per Indiana Code 14-28-1. The IDNR requires permit applicants to notify adjoining property owners of a pending application, and to inform adjoining property owners of their rights.

The TELWF is applying for a permit from the IDNR for the construction of a sediment trap at the mouth of the Hanna B. Walker Drain

You are not required to take any action on this application, however if you wish to petition for a public hearing or be notified when the IDNR has made an initial determination to issue or deny the permit, the procedure is described in the enclosed Public Notice.

If you have any questions, please call me.

Sincerely, J.F. New & Associates, Inc.

John B. Richardson Project Manager

Enclosure

Property Owner	Address
William and Susan Gerrity	5361 E 650 North Syracuse, IN 46567
Kelly and Esme Phillips	PO Box 1387 Warsaw, IN 46580
Ann V. Brennaman	5521 E 650 North Syracuse, IN 46567
Kevin and Pamala Gilbert	5413 E 650 North Syracuse, IN 46560
Michael and Patricia Shirley	5516 Four Mile Drive Kokomo, IN 46901
James and Kathy Stefanatos	1616 Alber Street Wabash, IN 46992
Alice Long	6049 East 650 North Syracuse, IN 46567
YMCA Camp Crosley	65 EMS T2 Lane North Webster, IN 46555

#### PUBLIC NOTICE

Date: October 6, 1998

### Dear Property Owners:

Legislation has been enacted, Indiana Code 14-11-4, which ensures that adjacent property owners are both notified of permit applications and provided with an opportunity to present their views to the Department of Natural Resources prior to action.

Under this legislation, the applicant or agent is responsible for providing notice to property owners whose property shares a common border or point within the property where the project would take place AND whereby that common border or point is located within 1/4 mile of the project site. Included is property which would share a common border, if not for the separation caused by a right-of-way, easement, or railroad.

Due to your proximity to the project site, you are considered to be an adjacent party. Therefore, notice is being provided in conformance with the provisions of IC 14-11-4 and 310 IAC 0.6:

Applicant's Name and Address:

Tippecanoe Environmental Lake & Watershed Foundation
Attn: Holly LaSalle

67 EMS T49A Lane

Syracuse, Indiana 46567

Agent's Name, Address and Telephone Number:

J.F. New & Associates, Inc.

708 Roosevelt Road Walkerton, Indiana 46574

219-586-3400

Project Location:

Section 8, Township 33 North, Range 7 East

Name of Stream or Lake:

Hanna B. Walker Drain

Project Description:

Construction of a sediment trap at the mouth of Hanna

B Walker Drain

Relevant Statute/Rule

Flood Control Act, IC 14-28-1

You may request an informal hearing (pre-AAA hearing) on this application by filing a petition with the Director, Division of Water. The petition must conform to administrative rule 310 IAC 06.-3-2.3 as follows:

- (a) This section establishes the requirements for a petition to request a public hearing under IC 14-11-8(a)(2).
- (b) The petition shall include the signatures of at least twenty-five (25) individuals who are at least eighteen (18) years of age and who reside in the county where the licensed activity would take place or who own real property within one (1) mile of the site of the proposed or existing licensed activity.
- (c) The complete mailing addresses of the petitioners shall be typed or printed legibly on the petition.
- (d) Each individual who signs the petition shall affirm that the individual qualifies under subsection (b).
- (e) The petition shall identify the application for which a public hearing is sought, either by division docket number of by the name of the applicant and the location of the permit.

The pre-AAA hearing on the application will be limited to the Department's authority under the permitting statutes. The Department's jurisdiction under the <u>Flood Control Act</u> is confined to the floodway of the stream and its review limited to the following criteria:

To be approvable a project must demonstrate that it will:

- (a) not adversely affect the efficiency or duly restrict the capacity of the floodway; defined as, the project will not result in an increase in flood stages of more than 0.14 feet above the base 100-year regulatory flood elevation.
- (b) not constitute an unreasonable hazard to the safety of life or property; defined as, the project will not result in either of the following during the regulatory flood:
  - (1) loss of human life,
  - (2) damage to public or private property to which the applicant has neither ownership nor a flood easement;
- (c) not result in unreasonably detrimental effects upon fish, wildlife or botanical resources.

Additionally, the Department of Natural Resources must consider the cumulative effects of the above items.

Only the above issues relevant to the appropriate Act directly related to this application for construction will be addressed. Under permitting statutes, the Department has no authority in zoning, local drainage, burning, etc; therefore, topics beyond the Department's jurisdiction will not be discussed during the hearing.

You may also request that the Department notify you in writing when an initial determination is made to issue or deny the permit. Following the receipt of this post action notice, you may request administrative review of the determination by the Natural Resources Commission under IC 4-21.5 and 310 IAC 0.6.

Questions relating to the project should be addressed to:

J.F. New & Associates, Inc. 708 Roosevelt Road Walkerton, Indiana 46574 Telephone: 219-586-3400

A request for a pre-AAA hearing or notice of initial determination should be addressed as follows:

Indiana Department of Natural Resources
Division of Water
402 West Washington Street, Room 264
Indianapolis, Indiana 46204-2748
Telephone: 317-233-5635



708 Roosevelt Road P.O. Box 243 Walkerton, IN 46574 Phone: 219-586-3400

FAX: 219-586-3446

Wetland Delineations • Permitting • Mitigation Design • Engineering • Wetland/Prairie Nursery Land Planning • Biological Inventories • Natural Systems for Wastewater Treatment • Lake and Stream Enhancement . Ecological Restoration

22 October 1998

3955 Eagle Creek Parkway, Suite A Indianapolis, Indiana 46254 Phone: 317-388-1982 Fax: 317-388-1986

Randy Jones IDEM-Office of Water Management P.O. Box 6015 Indianapolis, IN 46206-6015

RE: 401 request, Hanna B. Walker Drain, Kosciusko County, Indiana

Dear Mr. Jones:

J.F. New & Associates, Inc is under contract with the Tippecanoe Environmental Lake and Watershed Foundation (TELWF) to complete a feasibility study which includes permit applications to construct a sediment trap at the mouth of Hanna B. Walker Drain. The purpose of this sediment trap is to trap the excessive amounts of sand and organic matter flowing from the ditch into Lake Tippecanoe. The site is located in Section 8 of Township 33 North, Range 7 East in Kosciusko County, Indiana (Figure 1). The owner of the property is Camp Crosley who be granting an easement to TELWF to construct and maintain the project.

The sediment trap will be constructed from the east side of the ditch with no disturbance to the west side (Figures 2-4). The sediment trap will temporarily disturb a maximum of 0.04 acres of jurisdictional "waters". There will be no net loss of "waters" or wetland when the sediment trap is completed. This project will be maintained annually or on an as needed basis.

We are requesting 401 Water Quality Certification with the attached application. TELWF is the official agent and will be permit holder and responsible party. J.F. New is submitting this application on behalf of TELWF. Please refer to my earlier correspondence and our April site meeting for this project.

Thank you.

J.F. New and Associates, Inc.

ohn B. Richardson Project Manager

enc.

c. Holly LaSalle - TELWF Amy Babey - Corps of Engineers

## **Application for Water Quality Certification**

Address all applications or questions to:

# Indiana Department of Environmental Management Section 401 Water Quality Certification Program

100 North Senate Avenue, PO Box 6015, Indianapolis, Indiana 46206-6015 1-800-451-6027 or 317-232-8683

## PLEASE PULL OUT APPLICATION FROM PACKET

Failure to provide the information requested in this application may result in a delay of processing or denial of your application.

For office use only			
Project Manager:			
Date Received:			
IDEM I.D. Number:			
County:			

1. APPLICANT INFORMATION			
Name of Applicant			Mailing Address (Street, PO Box or Rural Route)
Tippecanoe Er Foundation	Tippecanoe Environmental Lake & Watershed Foundation		Attn: Holly LaSalle 67 EMS T49A Lane
City	State	Zip	
Syracuse	IN	46567	
Daytime Telephone Number			Fax Number
1-219-834-2185			

2. AGENT INFORMATION			
Name of Agent			Mailing Address (Street, PO Box or Rural Route)
J.F. New & Asso	J.F. New & Associates, Inc.		Attn: John Richardson
City	State	Zip	708 Roosevelt Road
Walkerton	IN	46574	
Daytime Telephone Number			Fax Number
1-219-586-3400			1-219-586-3446

3. <b>PROJECT INFORMATION</b>			
County project is located in	Nearest Town		
Kosciusko	Syracuse		
Project Name or Title (if applicable)	Project Street Address		
Sediment Trap Installation	N/A		
Type of aquatic resource to be impacted	Name of waterbody		
open water stream	Hanna B. Walker Drain		
Linear feet of bank/shoreline impact (if applicable)	Acreage of wetland proposed to be impacted (if applicable)		
100	N/A		
Acreage of wetlands on site	Cowardin Classification (if known)		
None			

4. Describe proposed project:
Construction of a sediment trap at the outlet to Lake Tippecanoe from the Hanna B. Walker Drain. The sediment trap will be excavated out of the floodplain to approximately 4' below the existing bottom elevation of the ditch. There are no associated wetlands that will be impacted with the construction of the sediment trap.
5. Purpose of project:
The purpose of this project is part of the overall improvement of water quality on Tippecanoe Lake. This structure is designed to decrease sediment and contaminant load to Lake Tippecanoe from the respective ditch.
6. Date project will begin if permit is issued: 1/99
Anticipated completion date: 3/99
7. Describe possible alternatives to the proposed project to avoid or minimize impacts to the aquatic resource. Also describe where and how you plan on putting and containing the dredged/excavated material (if any) to prevent reentry into the aquatic resource.
Move sediment trap up or down stream. Sediment trap placement is based on landowner acceptance. Dredged sediment will be placed in existing basins previously designed to contain dredged spoils.
Do you expect to dredge any sediments that you know, or have reason to believe, are contaminated with pollutants?  Yes X No Please identify the pollutants that may be present in the sediment.
Are you aware of any unique resources (e.g., mussels) or threatened or endangered (state or federal) species present in the aquatic resource you are proposed to impact? Yes X No Please identify.
10. If fill is to be placed, describe the type, composition and quantity:
N/A

of Er	ngineers I	lied for an Army Corps of Engineers Section 404 permit? X Yes No. If yes, please supply the Corps D Number, the Corps of Engineers District, the project manager, and a copy of any correspondence with the Corps ontact the Army Corps of Engineers regarding the possible need for a permit application. (See instructions 11.)
	ig concur	•
12. Have	you appl	lied for, received, or been denied any other federal, state, or local permits, variances, licenses, or certifications for Please give the permit name, agency from which it was obtained, permit number, and date of issuance or denial.
l.		inage Board permit and DNR permit.
""	Ü	5 · · · · · · · · · · · · · · · · · · ·
L		
		n the following information:
X	A. -	List of adjacent landowners and persons who may be adversely affected by the project (Attachment A).
<u>X</u>	В.	A standard size drawing (8.5" x 11") of the proposed activity showing an overhead view and cross section that clearly illustrate the scale, north arrow, <b>wetland delineation</b> (and data sheets if required by the Corps see instructions), erosion control devices, existing and proposed structures and their dimensions, water depths and bottom configurations (if applicable), existing and proposed waterway configurations and elevations, dredge cuts and fills, and ordinary high water mark.
<u>X</u>	. C.	Photographs of the proposed project site; label the photos and identify the location(s) where the photographs were taken on the drawing.
	. D.	If proposed, a mitigation plan to minimize impacts to water quality including the restoration or creation of wetlands to replace the wetlands that will be lost as a result of the proposed project.
X	E.	Directions to the project location and a copy of a vicinity map and/or a copy of the portion of the U.S.G.S. 7.5 minute topographic map clearly showing the project location.
the inforr certify the are pena WQC are agree to local, sta	mation co at I have t Ities for s not cove allow rep	Water Quality Certification to authorize the activities described in this application. I certify that I am familiar with ntained in this application and to the best of my knowledge and belief, such information is true and accurate. I the authority to undertake and will undertake the activities as described in this application. I am aware that there ubmitting false information. I understand that any changes in project design subsequent to IDEM's granting of ered by the WQC, and I may be subject to civil and criminal penalties for proceeding with proper authorization. I resentatives of the IDEM to enter and inspect the project site. I understand that the granting of other permits by eral agencies does not release me from the requirement of obtaining the WQC requested herein before project.
Applicant	's Signat	ure: Wille Resullé; Lor TEHUF Date: 9/25/98

## ATTACHMENT A

Please be sure to include this attachment with your application. Failure to include it may result in a delay of processing or denial of your application.

Adjacent landowners and other persons (or entities) who may be affected by your project need to be notified of your project. Please list the names and addresses of landowners adjacent to the property on which your project is located and the names and addresses of other persons (or entities) potentially affected by your project. Attach additional sheets if needed.

Name:	William & Susan Gerrity
Address:	5361 East 650 North, Syracuse, IN 46557
Name:	Kelly & Esme Phillips
Address:	PO Box 1387, Warsaw, IN 46580
Name:	Ann V. Brennaman
Address:	5521 East 650 North, Syracuse, IN 46567
Name:	Alice Long
Address:	6049 East 650 North, Syracuse, IN 46567
Name:	Michael & Patricia Shirley
Address:	5516 Four Mile Drive, Kokomo, IN 46901
Name:	James & Kathy Stefanatos
Address:	1616 Alber St, Wabash, IN 46992
Name:	Pamala and Kevin Gilbert
Address:	5413 E 650 North, Syracuse, IN 46560
Name:	4400
Address:	
Name:	
Address:	
Name:	
Address:	
	de the names and telephone numbers of the two largest newspapers of general circulation in the project

area.

Newspaper name:	Warsaw Times Union
Telephone number:	219-267-3111
Newspaper name:	Milford Mail Journal
Telephone number:	219-457-3666



Facing north at existing and proposed disposal area for dredged materials from sediment trap on Hanna B. Walker Drain.

JFNA FILE# 95-08-2201

J.F. New & Associates, Inc.

708 Hoperell Roed P.O. Sex 243 Welkerton, St 48574 Phone: 219-388-3400 FAX: 219-388-3448



Facing downstream from proposed sediment trap location on Hanna B. Walker Drain.



Facing upstream from proposed sediment trap location on Hanna B. Walker Drain.

JFNA FILE# 95-08-2201

Site Photographs Hanna B. Walker Drain Kosciusko County, Indiana



708 Recrevelt Rood P.O. Box 243 Walkerton, IN 48574 Promis 218-588-3400 FAV. 210-588-3408





JFNA# 95-08-2201

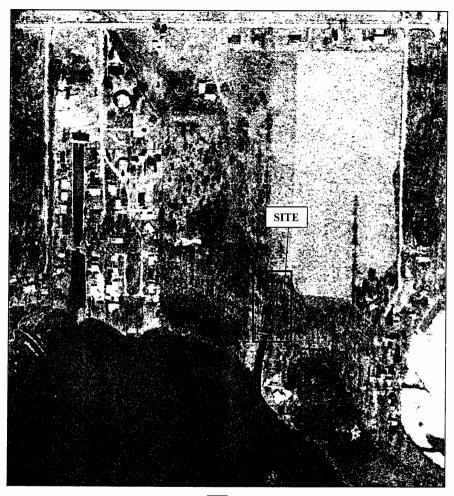
Scale: 1" = 2,000'

Figure 1: Location Map
Sediment Trap
Hanna B. Walker Drain
Lake Tippecanoe
Kosciusko County, Indiana



708 Roosevelt Road P.O. Box 243 Walkerton, IN 48574 Phone: 219-588-3400 FAX: 219-588-3448

Permitting • Delineations • Mitigation Design • Biological Inventories
Welland and Prairie Nursery • Lake and Stream Enhancement
Natural Systems for Wastewater Treatment



Scale: 1" = 400'

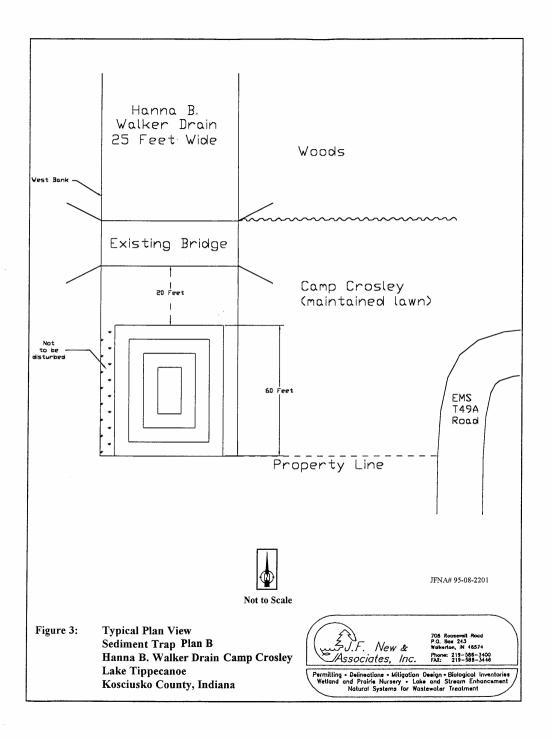
JFNA# 95-08-2201

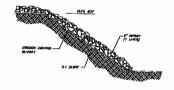
Figure 2: Aerial Photograph, Spring 1987
Sediment Trap
Hanna B. Walker Drain
Lake Tippecanoe
Koscuisko County, Indiana

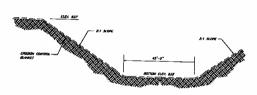


708 Roosevelt Road P.O. Box 243 Wolkerton, IN 48574 Phone: 219-586-3400

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RIPRAP AT SEDIMENT TRAP - SECTION A-A

SEDIMENT TRAP - SECTION B-B

Scale: 1" = 50'

Figure 4:

Typical Cross-section

Sediment Trap Plan A

Hanna B. Walker Ditch - Gilbert Property

Kosciusko County, Indiana

JFNA FILE# 95-08-22-01

Associates, Inc. Parmitting - Defineations - Mitigation Design - Biological Inventories
Welland and Prairie Nursery - Lake and Stream Enhancement
Natural Systems for Woolevater Treatment

## XVII.

# FINAL DESIGN PLANS

# INDIAN CREEK DETENTION BASIN

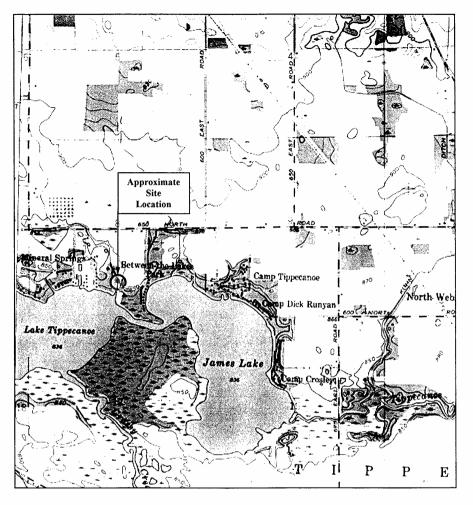
# HANNA B. WALKER DITCH SEDIMENT TRAP

LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

#### XVII. Final Design Plan Summary

The two projects with this section were taken from the conceptual drawing stage to the final design and permit application stage as per a change of scope approved by TELWF in a letter dated August 25, 1998 and by the IDNR response of September 1998. A floodstage analysis or HEC model, was not required for any of the conceptually designed structures as there is no addition of fill material or obstructions of any kind within the IDNR designated floodway of Kuhn Ditch. Indian Creek and Hanna B. Walker Ditch have less than one square mile of drainage area, therefore, the IDNR does not have jurisdiction on these streams.



JFNA# 95-08-2201

Scale: 1" = 2,000'

Figure 1: Location Map
Sediment Trap
Hanna B. Walker Drain
Lake Tippecanoe
Kosciusko County, Indiana



708 Roosevelt Road P.O. Box 243 Walkerton, IN 48574 Phone: 219-585-3400

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Wetland and Prairie Nursery • Lake and Stream Enhancement
Natural Systems for Wastewater Treatment





Scale: 1" = 400'

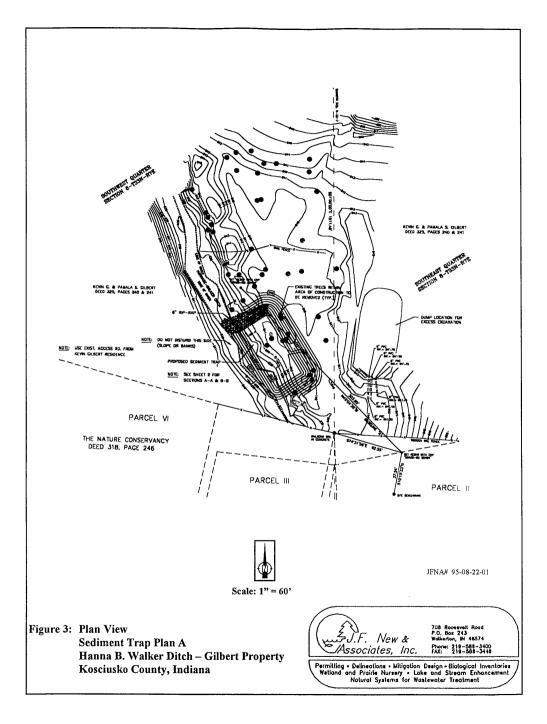
JFNA# 95-08-2201

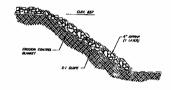
Figure 2: Aerial Photograph, Spring 1987
Sediment Trap
Hanna B. Walker Drain
Lake Tippecanoe
Koscuisko County, Indiana

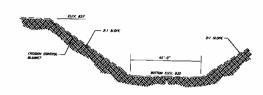


708 Roosevelt Road P.O. Box 243 Walkerton, IN 48574 Phone: 219-588-3400

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RIPRAP AT SEDIMENT TRAP - SECTION A-A

SEDIMENT TRAP - SECTION B-B

Scale: 1" = 50'

Figure 4:

**Typical Cross-section** Sediment Trap Plan A

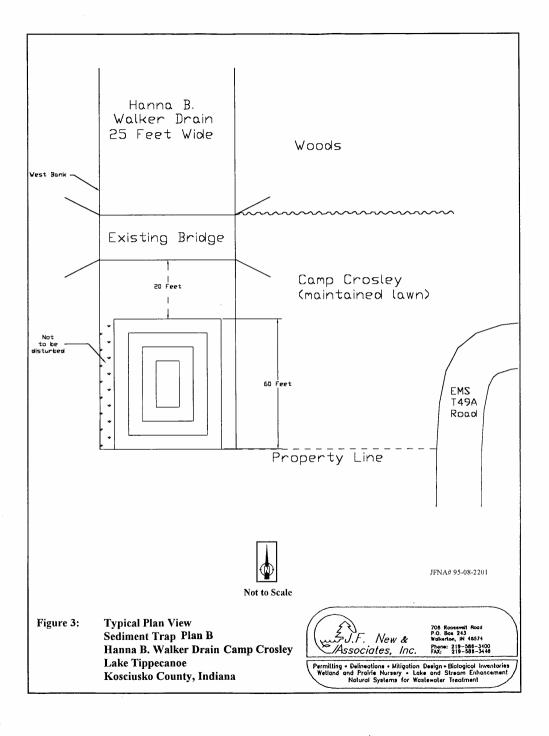
Hanna B. Walker Ditch - Gilbert Property

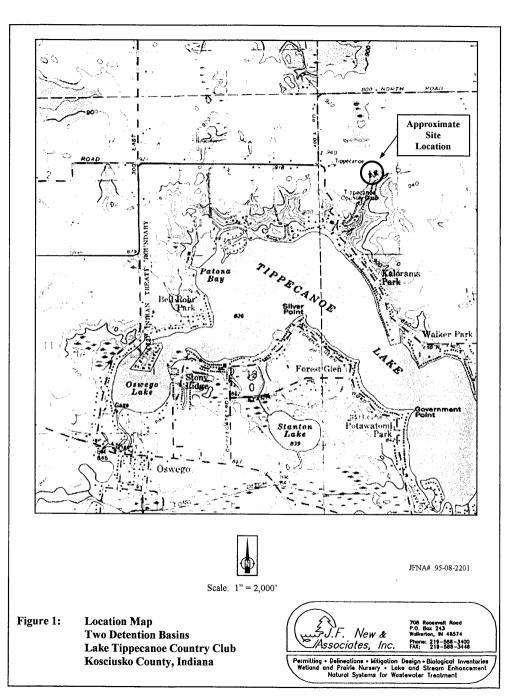
Kosciusko County, Indiana

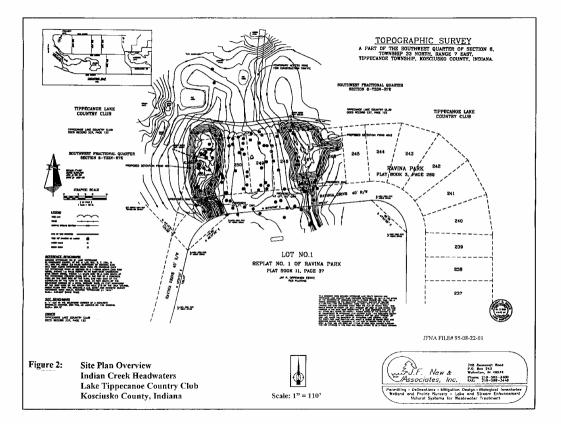
JFNA FILE# 95-08-22-01

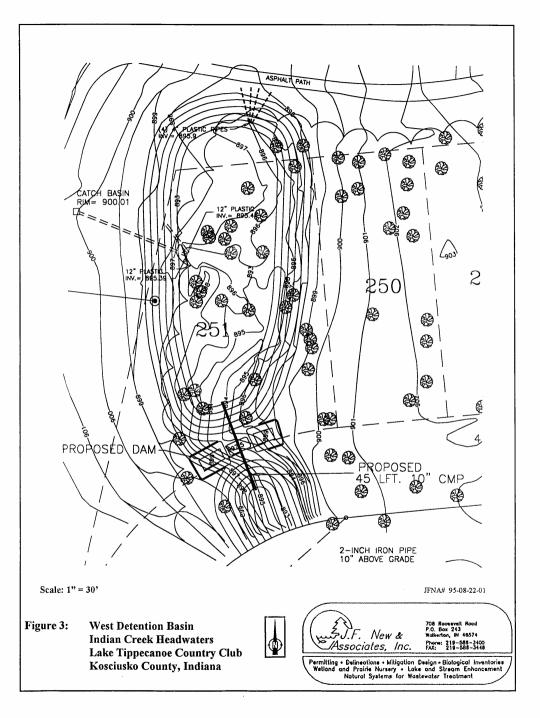


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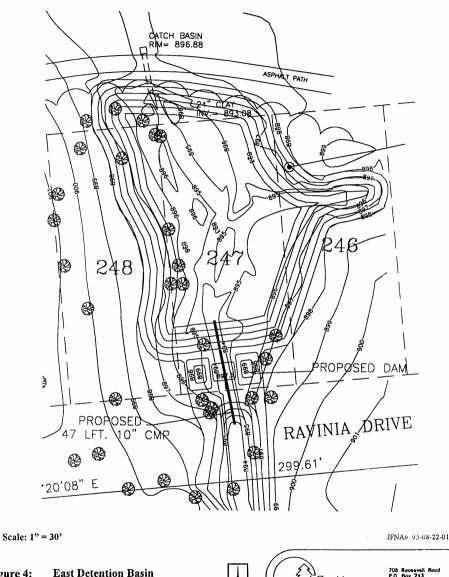


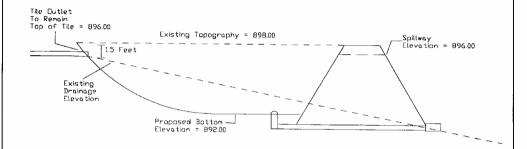
Figure 4: East Detention Basin
Indian Creek Headwaters
Lake Tippecanoe Country Club
Kosciusko County, Indiana



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#### TYPICAL CROSS SECTION BASIN #1 AND #2



JFNA FILE# 95-08-2201

Figure 5: Cross Section
Two Detention Basins
Lake Tippecanoe Country Club
Kosciusko County,, Indiana

Not to Scale

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# XVIII. DESIGN AND CONSTRUCTION

**COST ESTIMATES** 

LAKE TIPPECANOE FEASIBILITY STUDY

KOSCIUSKO COUNTY, INDIANA

#### XVIII. Design and Construction Cost Estimates

The following table estimates the costs to finalize design plans, obtain permits, administer, supervise and construct each of the four conceptually designed projects.

#### Assumptions:

- 1. Each project has surveying and preliminary design complete and landowner approval to construct the project.
- 2. Access to each of the project locations is part of the landowner agreement.
- 3. A 20% construction contingency was used on the Tippecanoe Country Club Indian Creek detention basins to account for likely repairs to drainage and irrigation systems, cart paths and fairways. All other projects were allowed a 10% construction contingency.
- 4. Permitting does not require any additional hydraulic modeling, environmental studies, public meetings or additional drawings beyond the design phase.

## XVIII. Design and Construction Cost Estimates

	2 Detention Structures on Indian Creek	Combination Seditment Trap & Nutrient Filter on Hanna B. Walker Drain	Second Sediment Trap on Hanna B. Walker Drain	Combination Sediment Trap/ Nutrient Filter on Kuhn Ditch	All Projects
Design Plans	\$6,000	\$4,000	\$2,000	\$5,000	\$18,000
Permitting	\$1500	\$1500	\$1500	\$1500	\$6,000
Bid Administration	\$4,000	\$2,500	\$700	\$3,600	\$10,800
Construction Supervision	\$4,500	\$4,500	\$1,000	\$7,500	\$17,500
Construction Costs	\$80,000	\$51,700	\$13,750	\$72,600	\$217,450
Total	\$96,000	\$64,200	\$19,000	\$90,200	\$269,400